A Lecture
ON
GOUT IN SOME OF ITS RELATIONS TO SURGERY.

Delivered at St. Bartholomew's Hospital,

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GENTLEMEN,—Among the many infirmities of our nature gout holds a conspicuous place. In some one or more of its various phases it is so common that a large proportion of the population do not attain advanced age without some personal experience of it—at least in this country—so that we, and others who view it only from afar, are wont to associate it with the constitution and habits of Englishmen. With us, indeed, its fame is truly historic, for not only has the term for several generations been a familiar one, but the "martyrs" to gout include some of the greatest names that adorn our annals. It is literally true that many of its victims have found consolation for their suffering in the reflection that this has been shared by some of the most famous of their race. Nay, by not a few a meaner solace has been drawn from the thought that gout prevails among the rich and luxurious who lead "fashionable" lives. Gout is well known to all classes not only by name but by its principal features. To speak of it is not only to recall advanced age and many of the habits of our social life, but an attack of sudden and urgent pain in a toe or foot which renders its use impossible and is sorely aggravated by any touch or attempt at movement, thus compelling a patient to "lie up," when he is subjected to the most rigid restriction of diet and debarred from every other indulgence which through long habit has become to him a second nature. The picture of agony and restraint is miserable enough, and yet his friends are wont to speak of it with a smile or an expression of relief, as if it were only *that*, and might have been something far more grave and disastrous. Nor, it must be confessed, is this levity altogether ill-timed or misplaced; for such attacks are very rarely indeed fatal or even considered dangerous, and they are not only supposed to be brought about by a very undue share of the so-called pleasures of life, but they are believed to be highly beneficial in the long run by clearing the system and enabling the patient to make a fresh start with renewed health and vigour.

The word "gout" has a far wider signification at the present day than in past times. The former view of the malady has become much enlarged, and now various affections are attributed to this cause which heretofore were regarded as altogether apart from it. This more comprehensive idea of gout has not come to prevail without much adverse criticism, and we are still often charged, and sometimes perhaps not altogether without justice, with an undue desire to attribute to it many obscure disturbances, both local and general, for which we are unable to account. Gout has gradually come to play the part of rheumatism in this respect, and what was said of that disease long ago—that it was the great refuge for the destitute in diagnosis—is now charged against gout.

Be this as it may, the old view of gout is now generally regarded as a very inadequate one, and the regular and typical attacks of gout on a very limited region—as for the best known, that of the great toe—is reckoned only as one, and by no means the most frequent, aspect of it. It is nowadays far more commonly seen and recognised in various other forms, and these numerous manifestations present a large and important field of clinical study; and the surgeon is more particularly interested in these cases when they supervene, as they so often do, upon some accident which entails sudden confinement. In persons of gouty diathesis there is always danger of this, and in this way they are made aware, perhaps for the first time, of this tendency. Sometimes gout is declared directly in the injured part—a very significant fact. Sometimes it becomes manifest elsewhere, as in the forms of eczema or phlebitis. Nor, when the pathology of this disease and the causes which determine local forms of it are considered, does it appear very difficult to understand how injury and sudden change of habit may induce a local attack of it.

Let us pass in review the more remarkable of these expressions of gout. First we may notice, apart from any obvious physical change, pain in any of its various forms and in all degrees of severity in any and every part of the body—sharp darting pains, very often called neuralgia—which no doubt in the etymological sense they are—coming suddenly and often as suddenly ceasing, excruciating in character, and in this way sometimes leading to much general disturbance. These stabbing or lancinating pains are perhaps particularly frequent in the head, loins, and male pelvic organs, but they are hardly less common in the joints and limbs. Their fitful character and severity, without any further local disturbance, are important points in the diagnosis. This, of course, is aided by the consideration of the age, habits, and general condition of the patient. Neuralgic pains of another kind occur at any period of adult life, more particularly in women, and are often associated with hysterical symptoms, for the most part in the young, in connexion, perhaps, with some form of uterine disturbance; but these pains, with or without tenderness, are far more frequent in, although by no means confined to, men who are advanced in life, and whose mode of living and condition of urine suggest very strongly the gouty nature of their complaint. Or sometimes the pain is of a very different character—dull, heavy, and abiding, and in its graver forms allowing of little or no rest, though often aggravated by movement. Perhaps the best known instance of this is the pain in the muscular and fibrous tissues of the loins and spine, called lumbago. We all know how severe and prolonged in some cases this may be, so as to suggest or render probable the existence of chronic inflammation in some portion of these textures, or even similar mischief extending to the membranes within the spinal canal. The pain, too, in the course of the great sciatic nerve, which is called sciatica, and which in some cases is, no doubt, due to inflammation of the fibrous substance of the nerve, is another instance. No doubt these affections are more commonly regarded as forms of rheumatism; but it appears to me that, at least in a majority of these cases, the evidence points rather to an origin in gout. Then, as in what may be called its typical form, so in other instances, gout is very prone to excite inflammation, both acute and chronic, in various parts and structures. Fibrous tissues are especially liable to these attacks of gouty inflammation. Hence the joints, synovial sheaths, and fasciæ are very often affected. Pain of a fitful character, sudden and severe, attracts attention to one or more joints, which are speedily found to exhibit all the signs of acute inflammation, extreme tenderness, increase of heat, with, it may be, redness of the surface, accompanied by swelling and effusion, and also œdema, which sometimes occurs rapidly, in other instances is delayed for several hours, and is usually followed by some abatement of the pain, and, later on, by desquamation, but very rarely indeed—and this is characteristic—by suppuration. Synovial sheaths around a joint may be the chief seat of, or may, though in a less degree, participate in, the disturbance; and these attacks of joints and corresponding structures are remarkable not only for their fluctuation but for their shifting character. The onset is sudden, and the subsidence almost as rapid. But as the mischief disappears from one joint it as suddenly lights up in another, which in its turn disappears, to be followed by mischief somewhere else—it may be a recurrence of the acute symptoms in the part first attacked—and this metastasis, as it is called, or alternation, is sometimes so often repeated as to depress not only the spirit but the constitution of the patient. In other cases the inflammation is of a more chronic character, and then it usually pursues a less unsteady course. It remains more fixed in the part originally attacked, with little or no disposition to change from day to day. These more chronic attacks when recurrent sometimes lead to ankylosis in various degrees or partial dislocation, chiefly from the damage done to the structures by gouty deposits. These occasionally appear as considerable lumps of urate of soda. But it should be borne in mind that there may be deposits of urate of soda in the cartilaginous and fibrous structures without external evidence of it or any obvious impairment of function. Indeed Garrod affirms that "gouty inflammation is invariably attended by the deposition of urate of soda." No doubt in all gouty inflammation the tendency at least to such deposition exists. The joints of the fingers

are especially prone to suffer in gout, and no deformity, as the result of this disease, is so familiar to us as that of the fingers. Hence in a suspected gouty diathesis we look at once to the fingers, and their distortion is sometimes very remarkable. Not that it is to be at once concluded that all deformity from abnormal deposit is due to gout. The well-known nodes which Heberden described, with occasionally the curious little cysts over them, may perhaps in rare instances arise from other causes. At all events gout cannot in every instance be shown to be the cause of them. But, while the joints are certainly, in the first instance, more prone to the acute attacks, the various fasciæ are far more prone to the chronic form of mischief, the recovery from which is often far less complete. The attacks of the joints repeatedly occur and completely clear up, leaving no visible trace of mischief behind. At length, indeed, the structures may show signs of permanent change, but even in advanced cases this will often, in course of time, though very gradually, disappear, but the fasciæ are much more disposed to remain permanently thickened and contracted, leading in their way to limitation of movement and deformity. Gouty inflammation of the palmar fascia is a well-marked case in point; the slips of it which pass onward to the fingers become thickened and then gradually shrink, so flexing, and thus fixing, the proximate joint of one or more of them that it becomes incapable of extension. In some instances the tendons themselves become involved in the mischief, and present nodules or lumps in their substances, but usually the deformity is due to mischief confined to the fascia. And this is sufficiently troublesome when even a single finger is seriously involved, but in very bad cases, where a considerable area of the fascia is attacked, the hand will become very strangely deformed and practically almost useless. All the fingers may be drawn into the palm, and not only extremely flexed, but twisted too; and the fascia of the palm itself so thickened and contracted that the whole of the structures appear to be matted together into a rigid and nodulated mass. I think almost all such cases may be looked on as being gouty in their origin. In some instances, perhaps, it is difficult to establish the fact, and in others the contraction appears to be the result of some external cause—to be due to some local irritation from without. I have seen this condition in its less aggravated forms so repeatedly in brass-workers as to suggest that the mischief may be thus provoked; but even here it has appeared probable that the exciting cause has been acting upon structures in a gouty constitution.

These cases often call for, and when judiciously selected are often greatly benefited by, surgical treatment. Sometimes the gouty deposits show themselves in the neighbourhood of joints and elsewhere, and owing to the extent of their accumulation create much local disturbance. The surrounding tissue continues in a state of chronic inflammation. The skin stretched over the mass becomes of a dusky tint, then sore, perhaps from friction or pressure, and at length gives way, forming the so-called gouty ulcer, from the surface of which some of the urate of soda from time to time escapes. Such breaches of the distended integument are, of course, not readily repaired, and owing either to their size, or more commonly to their situation, these deposits sometimes occasion so much local inconvenience as to justify their removal. They may either be dealt with as tumours and dissected out, or the mass may be exposed and detached by the fashionable process of scraping; but in either case the wound which is left is not always disposed to heal very kindly.

There is another point with reference to the fibrous and other structures in their relation to gout which is worthy of notice. We all know that as life advances many of the tissues are prone to become less pliant and elastic, to grow more rigid, and hence they become less able to adapt themselves to strains and other sudden movements. We are perhaps most familiar with this change in the arteries, but its application is a very wide one. Ligaments, tendons, and fasciæ no doubt largely share in it. Now this change, which in its least degree is senile, is, I have no doubt, very strongly accentuated by gout, and hence some of these structures are liable to rupture from degrees of violence which would produce no harm in a more healthy condition. In two or three instances I have seen rupture of one of the extensor tendons of the fingers in this way, leading to sudden and permanent flexion of the distal joint.

As we grow old, and especially if we grow gouty, we are plainly enough warned of this pervading change. The signs of advancing years may not be very rudely thrust upon our consciousness as we live and move in the ordinary way. No sudden revelation is made by our accustomed habits and occupations; but it is, when forgetting we are no longer young, that some extraordinary exertion or unusual extent of exercise brings the fact of this change home to us in a startling and unpleasant way. No doubt very much depends here on one's mode of life, and those who are accustomed to bodily activity maintain far into life a great advantage in this respect both in general health and power of adaptation; but these also more often incur the risk and penalty of accident.

It is, I take it, tolerably clear that some eruptions and other forms of inflammation of the skin are often due to gout. No one, I suppose, doubts the close connexion which subsists between gout and eczema—that eczema, indeed, is one of the most frequent forms in which a gouty diathesis is manifested. Eczema is a term very loosely employed, and even when more carefully restricted it is still a vague one and comprehends various kinds of inflammation of the skin; but, as the word is frequently employed it may be said that the cause of eczematous eruptions is the cause of other kinds of local disturbance in gout. It often occurs coincidently with them; still more often it alternates with these, the one supervening while the other disappears, and occasionally not once or twice only, but many times. During its presence in the more acute and severe form the same kind of constitutional disturbance prevails, and similar causes, such as habits of life, operate to produce it. How common it is, for instance, for persons who are suddenly deprived of their accustomed exercise, especially if they are of full habit of body, to suffer from eczema. Such persons in active health, suddenly confined by a fracture of the leg, are very prone in the course of a week or two to suffer in this way, and the eczema is usually confined to those parts where the surfaces are in contact and the secretions of the skin retained; and I think one may go further in such cases and observe that these very troublesome and irritating attacks seem to take the place of some internal disturbance, which in other instances, as in phlebitis, interferes more seriously with the general health. Eczema, then, may for the most part be regarded as one of the local expressions of gout, sometimes the sole one, but often associated with other forms of mischief. It is common at all periods of life, but it occurs as a solitary affection far more frequently in the young, and the observation has been often made that children who suffer from eczema are likely to suffer from other forms of gout as life advances, and that when gout is inherited and appears in early life eczema is very often the form in which it first becomes manifest. The relation of eczema to unwholesome food in early childhood needs no comment; but even here, no doubt, it is more easily provoked in those who inherit the gouty diathesis.

One of the gravest of these local affections of gout is phlebitis, and this remarkable and interesting disease has of late years attracted much attention, so that gouty phlebitis has become familiar to us; and while phlebitis which is due to gout has its main features in common with phlebitis due to other causes, it has also distinctive characters of its own by which it may in most cases be recognised. There are the pain and, in the first instance, often acute tenderness in the course of the affected vein—usually of the lower extremity—which soon becomes full and abnormally firm to the touch, this firmness gradually increasing until, as thrombosis is established, the vessel becomes solid, and this is accompanied or followed by swelling and perhaps marked œdema of the limb. There is also in the severer cases decided constitutional disturbance. All this commonly belongs to phlebitis in all its forms, but in gouty phlebitis the attack is usually very sudden and the pain and tenderness very severe. It is particularly prone to attack the superficial veins of the leg—the saphena veins or their branches—and very rarely in the first instance the femoral itself. Often it begins in and never passes beyond one or two or three small branches of the saphena, and it will sometimes subside almost as rapidly as it appeared. This is characteristic, but still more so is the singular way in which it will almost suddenly pass from vein to vein, and then back again in the same manner to the original spot. This is its distinctive feature. Two or three inches of a small vein in one leg suddenly become painful and tender, with all the signs of phlebitis. After lasting for a day or two or less the symptoms rapidly subside, to the great relief of the patient, when as abruptly a similar attack occurs in the other leg. This lasts for a short period and then passes away, to be followed by a third attack either

in the first or second limb, and so on sometimes through many alternations until the patient is wearied by repeated disappointment and is perhaps in despair of complete recovery. The fitful character, which is certainly very striking, is not, however, always observed. The complaint begins in a small vein, but creeps onward until perhaps the greater part or the whole of one or both saphena veins is affected, and it may extend to the femoral and still pass upward. These, of course, are much graver cases, and involve all the risks and troubles of the worst forms of phlebitis. Here there are not only the greater risks of accidents from embolism, but the subsequent very prolonged trouble due to thrombosis and consequent obstruction. It may be said of phlebitis, I think, that in no other disease is the onset at once more rapid and recovery from it more tedious. With regard to embolism, perhaps, the liability to this terrible disaster has been exaggerated. In gouty phlebitis it is very exceptional. Gouty phlebitis is very frequently seen—the catastrophe of embolism is happily a very rare event. Even thrombosis is by no means always established in gouty phlebitis. Thrombosis, indeed, is always a part of phlebitis if the inflammation lasts long enough. The vein at length from this cause becomes a solid cord, but this is a process of time. It is a mistake to expect to find an inflamed vein in the condition of a solid cord in the earlier stage. The clotting, no doubt, is a rapid process, but the contraction and solidification of the clot are gradual ones, and in gouty phlebitis the inflammation often does not last long enough for this to occur, so that fortunately the patient escapes the tedious and troublesome consequences of confirmed thrombosis; for in the first place the affected vein is often never reduced to the condition of a solid cord, and in the second, even when this happens, the tributary stream which is thus shut off is only an insignificant one, and does not materially compromise the circulation of the limb.

The several viscera, each in its turn, are very liable to various disturbances from gout. Some of these appear to be wholly due to this cause, while other forms of mischief which owe their origin to an alien cause are materially modified by it. Gouty inflammation of the bladder, in which sometimes the kidneys and other portions of the urinary apparatus are involved, is a familiar illustration of such attacks. Gouty cystitis, like other forms of inflammation, may be acute or chronic. The acute form, which is far less common than the chronic, is usually very severe and the symptoms very urgent. The pain, distress and intolerance of the bladder are excessive, as they always are in acute cystitis, but here as elsewhere the fitful character of the attack and its fluctuation, together with the history and the general evidence of gout, indicate the cause. Moreover, the effect upon the urine and the coats of the bladder is, as a rule, not so severe as in cystitis from other causes. These cases often clear up more speedily than other severe ones of a different nature. Chronic inflammation of the bladder of a gouty origin or nature is one of the most troublesome and obstinate affections. Too often it yields only with great difficulty and at the best very slowly to treatment, and it is very prone to be renewed by trivial carelessness on the part of the patient or surgeon; in fact, even when for a time subdued, it may be said only to slumber, and is aroused into activity upon the slightest provocation. Temporary errors of diet or excess of alcohol, particularly in certain forms, or exposure to cold, or anxiety, worry, fatigue, or undue distension of the bladder itself will bring on an attack. Gouty disturbance of the bladder in its slighter degree is often expressed only by simple irritability, without any further signs of actual inflammation. The desire to pass urine is too frequent and unduly urgent. The patient is called on to relieve the bladder at very short intervals by mere change of temperature or even movement, and the urine which is passed is clear and pale. Every one knows that the bladder varies greatly, even within the limits of perfect health, not only in capacity but also in sensitiveness and tolerance; that there is a wide difference in these respects not only between the sexes but in different men; and that one man will pass urine only two or three times in the twenty-four hours while another is compelled to relieve himself every two or three hours. And, furthermore, it may be observed that in one class of those who are thus troubled the irritability is constant, while in another it fluctuates considerably and is greatly exaggerated by very trivial causes, and thus becomes an expression of mere nervousness. It is not always easy, therefore, to say when or to what extent this disposition is due to gout or to mark the line of departure from good health; but practically the question may be resolved by an examination of the urine. While this presents no abnormal character there is usually no indication for interference. I need hardly remark that in these cases of undue frequency of micturition the quantity of urine passed should not be overlooked, for of course the bladder may require more frequent relief either from its own irritability or because it becomes more rapidly filled. Associated with or apart from the bladder gouty pains, often of a sharp stabbing character, are not uncommon in the surrounding region. Pains about the perineum extending to the penis are often complained of, and one or both of the testicles are sometimes not only painful, but it or the epididymis will become suddenly enlarged and exhibit all the symptoms of acute inflammation; or the kidneys may suffer in a similar way. They are often disturbed, of course, in these cases by the quality of urine they have to excrete, but apart from this they appear not infrequently to suffer acute pain without any corresponding physical change in the urine. We are all familiar with derangements of the stomach, heart, and lungs from gout: of the stomach not only in the form of what is called gouty dyspepsia, but sometimes of much more acute and severe attacks; of the lungs in gouty bronchitis and asthma which are sometimes very characteristic; and of the heart in the various forms of disturbance and irregularity of action. I mention this here to call attention to the remarkable manner in which these attacks of different viscera sometimes alternate with one another. I suppose most of us can recall cases of this kind—cases usually, perhaps, of what are called confirmed gout, where viscus after viscus becomes suddenly attacked, and relieved only to be followed by similar trouble elsewhere. Gout in the bladder, for instance, which, after tormenting a person for several days, departs to be succeeded by a sharp attack of irritation with spasm, or perhaps inflammation of the bronchial tubes, which may in its turn subside coincidently with renewed disturbance of the bladder. So irregularity of the heart's action in one or more of its various forms is associated or alternates with troubles of various kinds elsewhere; most frequently perhaps with other symptoms of dyspepsia, but sometimes with complaints which might seem to be more remote from it. Sir James Paget has recently told us how in his own case an eczema alternated with irregular action of the heart, and certainly these fitful, shifting, local attacks are among its most characteristic features.

I need not say that the organs of the head do not escape. Perhaps no organ or structure anywhere enjoys complete immunity, but there is no doubt that the brain is sometimes very seriously disturbed. Gout in the head is recognised as a very grave affection, and assuredly the symptoms are severe and distressing enough. I suppose that here, as elsewhere, all degrees of disorder occur, from temporary irritation to actual inflammation. Gouty inflammation of the tunics of the eyeball is well known, but gouty disturbances of the auditory apparatus deserve more attention and elaborate study. These include, no doubt, not only deafness of every degree, but the various forms of tinnitus and other abnormal sensations more or less directly connected with the ear; giddiness in more than one of its forms and sickness. In fact, gout in one of its ways resembles hysteria. It not only appears in a very typical form, but its less striking manifestations are infinitely various, and in many of these there is a strange mimicry of the symptoms of other diseases. The relation, then, which subsists between these local affections of gout is shown in their common features, in their fitful character and abrupt transition, in the suddenness with which they are wont to appear and disappear, in the want of proportion between the severity of the symptoms and the local effects produced—above all, in their recurrence, association, and alternation—and in the more general evidence of gout which usually precedes and accompanies them. They own a common pathology and depend on a common cause.

The pathology of gout is a large question and is still in many respects obscure, but from what may be called a clinical point of view we know much of it, and our knowledge is directly serviceable in the management of these cases. In gout, no doubt, the process of nutrition is primarily at fault and conspicuously that part of it which consists in the retrograde changes and elimination of tissue products. Oxidation in its various stages and degrees is not thoroughly carried out, and the products of the waste and decay of the tissues, not being sufficiently transformed, linger in the blood and system and appear to take an active part in the disturbances which arise. Gout in the system may be compared to the smoke of a furnace. It represents imperfect combustion, an inadequate

action of oxygen on the fuel which, being incompletely consumed, escapes with difficulty and by its presence clogs and embarrasses the process of oxidation. And I think we may go further than this and be sure that it is from the side of the food and not from that of the oxygen that the mischief comes. There is no evidence in these cases that the supply of oxygen is deficient even in relation to excess of food, but there is often ample evidence not only of excess of food, but of food so much amiss in quality that the system is unable to assimilate it. Probably this is at the root of the mischief. Food of so improper a kind that it cannot be converted into a form appropriate for nutrition or oxidation encumbers the blood and can be removed from it only with difficulty and disturbance. The fire will not burn brightly enough, not because—at least in most cases—the stove is badly constructed, but because the fuel is too closely packed and of a quality that will not readily consume. Hence often the beneficial effect of exercise, which, as it were, increases the draught. Hence the effect on the quantity and quality of the various secretions and excretions and the conspicuous increase of certain products which represent impaired oxidation, the most prominent and easily recognised of which are perhaps uric acid and its salts. The close relation which exists between the character of the food and the amount of uric acid formed is well established, and so also is the close relation of uric acid to imperfect digestion and assimilation. How these products accumulate in the blood and system is well known, how abundantly, yet too often inadequately, they are carried off in the urine, and how when the blood becomes overladen with them or some accidental irritation arises in some part they are then thrown off and form the deposits and concretions with which we are all familiar as chalk or gout stones; and there can be little doubt that the gradual changes in the way of impairment of structure which is one of the most serious of the effects of the prolonged action of gout are associated with this abnormal elimination. In the several joints, especially in their fibrous structures and cartilages, in fasciæ and tendons, this admits of direct demonstration. The deposits are frequently found there in masses far too considerable to be overlooked; but in the arteries and vessels generally, in the crystalline lens, the tympanum, and other structures the same evil is at work. At times these deposits occur in strange places or assume very unusual forms, and may thus give rise to some difficulty of diagnosis. For instance, lumps or plates of this kind are sometimes found in the fibrous structure of the corpus cavernosum or its sheath. This view of the pathology of gout is founded also on our experience of the causes which tend to produce it. We are not without much knowledge of these causes, and this of a directly useful kind. If gout essentially depends on a want of due proportion between the supply of food or fuel and the processes of its due change and oxidation it should be in some way the outcome of excess of diet or deficiency of exercise or of both these causes combined; and this is certainly what we very commonly find to be the case. Physicians and surgeons are, I believe, very generally agreed on this point. High living, particularly in those who are of what is called a full habit of body, rich and luxurious food by which the appetite is tempted beyond any natural desire in those who are habitually lethargic or indolent, or, at all events, in those who are indisposed to healthy activity. Still further, if these means be aggravated by excess of alcohol in any of its various forms and many hours of the day or night be passed in overheated or ill-ventilated apartments—these are the more obvious causes which tend to create and establish a gouty diathesis. In this way gout becomes the penalty of idleness and indulgence in the luxuries of civilised life. Hence, in one form, it is seen most frequently in what are called the "well-to-do"; in those who are not driven by direct necessity to spend their lives in daily toil; in persons advanced in life, and, for the most part, men. But this by no means includes the whole scope of the subject. There is another side to it. It is also a matter of common observation that gout often attacks those of very opposite habits and constitution, those who are rather spare than full, abstemious and active; but this apparent contradiction may perhaps be explained. This latter class certainly predominates largely among those of a nervous disposition; active and energetic persons who are readily excited or disturbed, and who are conscious of the stress of anxiety and worry from business or other causes in circumstances which would produce no sensible effect on calmer and more stolid characters. Most persons, perhaps, only think of gout in connexion with high living, but in certain classes at least quarrels and lawsuits have as much to do with it as sloth and intemperance.

Now in these nervous persons who are so amenable to the effects of wear and tear there can be little doubt that the process of nutrition in its several phases is more readily disturbed, and principally through the nervous system. The exact relation which the nervous system holds to the process of nutrition is no doubt still somewhat obscure; but no one questions that the influence or control is very active and direct. No fact is more familiar to us than the disturbance of the process by causes operating through the mind. Witness the effect of emotion upon the appetite and digestion, the secretion of the skin and kidneys, and the action of the bowels; so that it is not difficult to understand how in this way gout may be brought about. Whether the substances into which food is converted be excessive in quantity in relation to the means by which they may be consumed or presented in such a form that the process of oxidation is unduly obstructed, or the change itself is interfered with by a disturbance of the natural process through some fault in the regulating function of the nervous system, in one respect it comes very much to the same thing. Surely this goes some way to explain the apparently very different conditions under which gout appears—some way perhaps to account for such terms as "rich man's" and "poor man's" gout. But there is a further complication here in the fact that the distinction between gout and rheumatism cannot always be clearly drawn; that the exact relation they hold to each other is obscure; and that while in typical cases of each the distinctive features are sufficiently marked in others they become confused. Indeed, this may be said of many diseases or disturbances of the general health; for, perhaps, gout illustrates better than any other form of mischief the difficulties of strict definition, and the tendency of morbid states to pass into one another, and no doubt there are some affections, such as hæmorrhoids and prurigo, which own as causes other morbid conditions as well as gout. The relation of gout to allied diseases may depend very much on the power of the kidneys to remove any excess of uric acid from the blood. Then, although these two modes by which gout itself may be produced are often distinct enough, they not infrequently operate together, or the operation of one cause is materially aggravated by the other; and then there may be added to this the very strong and sometimes irresistible influence of hereditary predisposition. Thus a man may exist with a very decided proclivity to gout, and yet escape it by very great care and in propitious circumstances; but some passing error in diet or excess of alcohol, particularly in some of its various forms, or some interruption of his accustomed habits, especially of exercise, or some unusual worry or anxiety, or an extraordinary mental effort, or even anything which disturbs the even tenour of his way, may cause an attack of gout to supervene.

I suppose it will be generally conceded that while such local manifestations of gout as I have sketched are more frequent now than formerly, certainly as primary attacks of it, or at all events more frequently recognised, the old typical attack as I have called it, is gradually becoming comparatively more rare; and if this be so may it not depend on the gradual change which has been wrought in our habits and the circumstances of social life? To some extent, perhaps, it may be due to the change in the character of our diet, still further to the change in the kind of wine consumed, in its strength and quality, and yet still more, perhaps, to the acute wear and tear of brain and nervous system in the keener struggle for existence, or rather in this respect for wealth. In the numerous discussions which have taken place on the question of change of type of disease—whether the actual features of diseases themselves become changed or whether it is only we who regard them that have changed in our views—I have sometimes wondered that the phenomena of gout have not been more often referred to. Is gout now precisely what it always has been, or has it gradually become modified by changes in the national life? At all events, this makes the recognition of gout, at least on its first appearance, not quite so obvious as it was formerly. Gout in its irregular or anomalous forms is not always at once readily recognised when there has been no previous indication of it in a more striking attack. From not distinguishing the "nervous" from the other form of gout disappointment is too often the result of treatment, and to this confusion is due in part the very opposite views which are expressed and carried out. In part, I say, for restrictions in diet and enforced inactivity are usually so disagreeable, especially when most needed, that patients, and perhaps medical men too, often

lean to the view which indulges the inclination. How often and amusingly one sees this illustrated in the instance of wine. At dinner a man longs for the same liberty of indulgence as those around him, but he knows well enough—for he has repeatedly learnt it in the most instructive way—that his favourite wines do not agree with him; so he starts the subject to show that the current belief of the relation of wine to gout is altogether erroneous, and that if such and such conditions are observed it does good rather than harm. Then others in a similar plight take up the question, quoting, perhaps, some opinion or statement which has been advertised, and ventilate their own views founded on what is called "experience." But no two agree in their conclusions, except, indeed, in that part of it which raises a laugh at the expense of doctors; but withal the stern fact remains and insists on recognition that, with very rare exceptions, alcohol is mischievous in gout—mischievous in every form, although, no doubt, the degree varies with the substances combined with it. There is difference in this respect between wine, spirit, and beer, and a much greater difference between good and bad wine; but, as a rule, for the prevention of gout perhaps in the case of all men the less alcohol the better. In that form of gout which depends on error in diet and want of exercise the indications for the most part are so plain and simple that the difficulty is not in prescribing them but in adopting them. During the attack the conditions are accepted submissively enough, but with the return of health and ease comes the return of bad habits, as everyone only knows too well.

It must be confessed that the indications for treatment in the nervous form of the attack are not so clear and the circumstances that provoke it are not always so completely under control. When, indeed, the disturbance can be traced to excessive anxiety or overstrain the indications are plain enough. In either case, when the patient is suffering, the mischief for the time is done; but not only is his constitution and the measures of hygiene less manageable in the latter than in the former, but I do not think that the most approved drugs are usually so beneficial. We do not obtain such decided effects from them; but this remark applies, I think, to every form of gout in which the attacks are recurrent. At each repetition the course of the affection is apt to become more irregular and remedies to disappoint us; but although treatment, sometimes even active, is often urgent enough at the period, the more important point is to ward off the attacks by due care in the mode of life during intervals of apparent health. There is a fair chance of success in this when the disposition is not too strong or the habits of the disease are not too firmly established. Even when organic changes have been wrought, much improvement may be expected under favourable conditions, but of course where important organs, such as the heart or kidneys, or arteries, have been permanently damaged constant care in another direction also will be needful. The forecast in these cases depends not only on the character and personal and family history of the patient, but also on the result of a thorough examination of his chief organs.

NURSE TRAINING INSTITUTION, MANCHESTER.—The annual meeting has just taken place of the subscribers and friends of the Manchester and Salford Sick Nursing and Nurse Training Institution, an organisation which is quietly and steadily accomplishing an enormous amount of good work in our midst. The association is, of course, in need of funds, as all really progressive and useful societies of this kind invariably are; but it is a healthy sign that the association are not only determined to continue their work on the old lines, but actually propose to extend their operations to new and hitherto neglected districts. For example, there are two areas which have recently been absorbed into the city—viz., West Gorton and Openshaw—which have long needed the kind of assistance that this society knows how to supply. These districts are inhabited for the most part by the humbler classes of mill hands and artisans, the houses are crowded in area, and are old and badly built, and as they have only formed part of the city since 1891 their sanitation is at a low ebb. It is to be hoped that means will be forthcoming to enable the society to grapple with the unhealthy conditions which abound in the districts referred to, and that the sanitary authorities will lend a helping hand to the emissaries of the society for the real and structural improvement of the homes of the people.

An Address
ON
CARDIAC FAILURE AND DILATATION OF THE HEART.

Delivered before the Nottingham Medico-Chirurgical Society in February, 1893,

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(Concluded from p. 6.)

DILATATION of the heart can be best studied in two groups—viz., (1) those in which it is caused either by primitive degeneration of the muscle fibre itself or by changes in the blood which affect the nutrition of the muscle; and (2) those in which there is some mechanical impediment in the circulation. In the former category will be found the more acute forms, whilst the chronic cases come into the latter, although in these acute symptoms often supervene and betoken a rapidly approaching end. Acute dilatation is often found to a limited extent in cases of anæmia and chlorosis, and the displacement of the apex-beat and the murmurs (especially those heard loudest at the apex), which I regard as generally due to dilatation, although they may be caused by hæmic changes alone, will always disappear under proper treatment. In fatal cases of leukæmia, Hodgkin's disease, pernicious anæmia, and chronic malaria, dilatation of the heart, with pallor or yellowness of the muscle fibre and a flaccid condition of the muscle walls, are nearly always found. In one case of pernicious anæmia, I transfused defibrinated blood, and the general symptoms of cardiac failure disappeared rapidly, but on a second transfusion five days later, when the symptoms had reappeared, no benefit whatever took place.

The following case well illustrates the dilatation of the heart which sometimes occurs in the anæmia which accompanies chronic malaria. The patient aged twenty-five years was admitted to the Seamen's Hospital on Jan. 24th, 1893. Three months previously he contracted malarial fever in Brazil. After being treated for three weeks in hospital at Brooklyn he returned home. For a month before admission he had been getting weaker and very breathless on exertion. On admission the anæmia was profound. The spleen was enlarged and could be felt beneath the ribs. The heart was dilated, the apex-beat being displaced towards the left about an inch. There was a systolic murmur at the apex, traced for a short distance towards the axilla; a loud systolic murmur was also audible over the pulmonary area. The blood was very pale. The red corpuscles formed imperfect rouleaux, and there was a marked excess of white corpuscles. Quinine, iron, and arsenic were given freely, with a diet of fresh meat and vegetables; there was, however, no improvement in the patient's colour, whilst the heart murmurs persisted. The pulse was small but regular. The temperature, with the exception of an occasional rise at night to 99° or 100° F., remained normal up to Feb. 16th, when it rose in the evening to 102·4°. Vomiting now set in, and the patient had to be fed for a few days with nutrient enemata. Fifteen grains of quinine were also given every four hours by the bowel until slight cinchonism was produced. On the evening of the 18th the temperature reached 104°; on the 19th it began to fall, and reached normal on the morning of the 21st. During this period of pyrexia he complained of sore-throat, but there was little to be seen except some congestion of the fauces and uvula. He shortly afterwards became able again to take fluid nourishment by the mouth and all vomiting had stopped. The anæmia, however, was as profound as ever and the heart was still dilated, but the spleen could no longer be felt. He died after a lingering illness, and only a dilated and thin-walled heart was found in addition to the usual effects of chronic malaria.

In scurvy the symptoms of cardiac dilatation are often manifest, although in my experience, which is now very extensive in this disease, murmurs are very rarely heard; I have never known a murmur in this disease to disappear under anti-scorbutic treatment, and I now attribute any murmur to a pre-existent valvular disease.

In cases of death in acute febrile diseases the heart is dilated and the muscle soft, friable, and flabby. This is

partly due to the high temperature which accompanies the fever and marks its severity. In more than one case of fatal hyperpyrexia I have found dilatation of the heart, and have noticed during life the displaced apex, a transverse increase in the area of dulness, a change in the first sound, and irregular murmurs at the apex. In none of them was any valvular lesion found after death. In one case of rheumatic hyperpyrexia, which I attended fifteen or sixteen years ago, in which the temperature rose to 107° F., these signs, including the murmurs, were all present, but they disappeared very rapidly after recovery and there has never been any suspicion of valvular mischief since. The patient is now a most active and vigorous man. The changes induced in striped muscle by the action of heat are an indistinct striation, with granular, or even fatty, changes in the muscle, which is uniformly soft, pale, and flabby. In addition to the mere question of temperature, there can be no doubt that some infective diseases exert a special action on the heart, and may thus induce cardiac failure. I have already instanced diphtheria, which stands out so prominently in this connexion that I cannot help thinking that influenza, typhoid fever, and typhus fever (of which latter disease I attended a very large number of cases in my early professional career) also exert a special depressing action on the heart. A loss of the prolonged boom of the first sound and its replacement by a short, clear sound is a most valuable indication in these diseases for the free administration of stimulants. Only two weeks ago a lad aged eighteen years, whom I only saw during the last three days of his life, died from typhoid fever early in the second week of the disease from simple asthenia. I was afterwards told that he had frequently fainted when at school and college, even as recently as two months before his death. Without any sign of valvular lesion, which was carefully looked for, he succumbed so early to the disease.

The most striking example of cardiac failure is to be seen in the case of the disease called "beri-beri," of which we had many examples last year at the Seamen's Hospital at Greenwich, and from which I shall give a general outline of the affection. Beri-beri is a disease confined for the most part to the coloured races of mankind. It is characterised by paresis, often amounting to actual paralysis of the extremities, generally the lower only. There is very frequently œdema present, which generally disappears early in the course of the illness. Tenderness of the muscles is a frequent symptom and is rather persistent. The sphincters are rarely, if ever, affected; the knee-jerks are always absent and very late in returning. Several circulatory disturbances arise often in the course of the disease. The heart is in many cases dilated and irregular in action, transient murmurs being present. Œdema of the lungs and pleural effusions are not infrequent complications in serious cases and may be the cause of death. When the disease is chronic, wasting of the muscles is a marked feature, and it is long before the tone and power of the muscles return. There is sufficient evidence that the disease occurs with frequency in certain ships and develops at sea often many weeks after leaving a foreign port. These facts are, of course, suggestive that it is possibly infective in origin. The disease is endemic in many parts of the East, where the mortality from it is said to be very high.

The onset of beri-beri is somewhat gradual, the weakness of the lower extremities which is often the first noticed symptom being generally preceded by pains in the limbs and back. The amount of weakness present varies from slight paresis to actual paralysis, with foot-drop and complete inability to stand. When the patient can walk the gait is very reeling and unsteady, the feet being sometimes shuffled along the ground. Sometimes the heels are brought to the ground first with a stamping action, as in ataxy, and sometimes the toes are caught in the ground as the foot is brought forward; this latter form of gait is due to the fact that the extensors have chiefly suffered, causing the characteristic foot-drop. The arms are sometimes weakened but seldom paralysed. Tenderness of the muscles is a constant symptom and may be very marked, causing the patient to scream when they are grasped; this symptom is most marked in the calf muscles and the thenar and hypothenar eminences. Œdema is very frequent and occurs early. It may be present in the lower extremities only or may be general, affecting the face, hands, trunk and legs, and giving to the patient the appearance of one suffering from renal disease. I have even seen œdema of the soft palate and fauces. It generally disappears quickly when the patient is at rest in bed under the influence of saline aperients. The pre-tibial and pre-sternal regions are the parts in which it lingers longest. The absence of œdema in some cases has led to the use of the terms "wet" and "dry" as applied to the disease; but it would seem that such terms are not of much value, only pointing to the absence or presence of a symptom. We do not speak of wet and dry heart disease. Anæsthesia is generally present at first; it is variable and evanescent, and is usually confined to the lower extremities. Accurate results are difficult to obtain on account of the nationality of the patients. Loss of the sense of touch and, consequently, imperfect coördination in the use of the fingers, especially of the index-finger and thumb, often persist for a long time; this is easily tested by putting a pin in the coverlet and making the patient pick it out. The heart is frequently dilated, the apex-beat being displaced outwards. Murmurs are often present both at the apex and over the pulmonary and aortic areas. These disappear as the dilatation subsides. When murmurs are absent the sounds are frequently reduplicated. The heart's action is in many cases very rapid and irregular, the pulse sometimes reaching from 120 to 150. All these phenomena disappear gradually under the influence of rest and digitalis. Anæmia is a constant symptom and is sometimes profound. The blood, so far as I know, shows under the microscope only the usual changes present in anæmia. I have never observed retinal hæmorrhages or other fundus changes. Œdema of the lungs, if at all extensive, should be looked upon rather as a complication than a symptom, and is of dangerous import. I have seen serous effusion into the pleural cavities which had to be treated by aspiration, but I do not think it is common. Ascites I have never seen, and I have not heard of it occurring. When death occurs it does so generally early in the disease unless the patient dies from some intercurrent affection such as pneumonia. In a fatal case (a Chinaman) which I saw death occurred after fourteen days' illness. One of the most prominent symptoms was intense pain in the epigastrium, which is said to be often present in fatal cases. Dyspnœa was very marked and the respiration was very hurried, being from 50 to 60 per minute. This may have been in part due to œdema of the lungs and pleural effusion, and possibly also to involvement of the pneumogastric nerves. Diaphragmatic and intercostal paralysis, however, was absent. Convalescence occurs very slowly. The legs are often wasted to mere sticks, the reaction of degeneration is well marked in the muscles and the skin becomes peculiarly dry and harsh. It is often many months before the patient is able to walk perfectly, and the knee-jerks, as in diphtheritic paralysis, are very late in returning. The urine is generally free from albumen. The temperature, except for some slight rise at the onset, is usually normal.

In a case of beri-beri at the Seamen's Hospital, after an illness of fourteen days' duration, the body, on post-mortem examination, was found to be well nourished and there was no œdema; rigor mortis was well marked. About half a pint of clear serous fluid was found in each pleural cavity. The lungs were very œdematous and contained very little air, which was of a bluish slate colour. The heart weighed fifteen ounces; the left ventricle was dilated and the muscle soft and friable; there were no valvular lesions or pericardial effusion. The liver, spleen, kidneys, and stomach appeared to be healthy. The brain revealed no abnormal changes to the naked eye. The pneumogastrics, left phrenic, left sciatic, and anterior crural nerves were dissected out and examined microscopically. Many sections of the nerves were cut, but no pathological changes were made out. For this careful and thorough description of beri-beri I am indebted to the notes and observations of my house physician, Dr Spencer. The course of the whole disease resembles a peripheral neuritis, and is altogether different from that which would be caused by a hæmatozoon, as is suggested by Sir Joseph Fayrer in "Quain's Dictionary of Medicine."

Another group of cases of cardiac failure is those in which inflammatory degenerative changes have taken place in the walls of the heart. A certain amount of myocarditis accompanies all cases of peri- and endo-carditis, but in some cases of acute rheumatism and in some septic fevers the signs of cardiac failure develop so quickly and are so grave that we must suspect a primary myocarditis. Many of these cases are absolutely without abnormal murmurs or friction sounds, though these may be heard at a later stage and are then due to an extension to the endo- or the epi-cardium. An adherent pericardium, if enormously thickened, gives rise occasionally to an atrophy or diminution in size of the heart, but it more generally acts as a mechanical obstacle to the due contraction of the viscus and leads to a secondary dilatation. Another class of cases in which the symptoms may come on rapidly or slowly is that caused by fibroid degeneration from an

interstitial myocarditis or from fatty degeneration of the heart. In both of these classes dilatation is nearly always present and the symptoms are those of cardiac failure. The amount of degenerative change varies greatly and the amount of dilatation also; but they are specially noticeable in cases of fibroid degeneration. A medical man about sixty years of age, who had enjoyed good health and had carried on a large general practice in a provincial town, first showed symptoms of cardiac weakness in August last, and these gradually became graver and graver and he died last month. Dilatation of the heart was diagnosed and there was no valvular murmur. Fibroid degeneration with great dilatation was found after death, and there was no mechanical impediment, so that the dilatation of cavities could only be explained by the presence of a primary degeneration in the cardiac walls. Fatty degeneration more especially, and fatty infiltration of the heart, leading to subsequent fatty degeneration of the muscle fibre, are causes of slow dilatation, inasmuch as there can only be a feeble contraction of the walls controlling the size of the various cavities, which are thus kept in a state of over-distension, but this will of course vary greatly in different cases.

A case of dilatation of the heart, in which organic and functional disease of the heart, lungs, liver, and kidneys co-existed, is narrated by Dr. Stokes as dependent on an asthenic and often a gouty condition of the system, and that excellent physician thought that such cases were common. On p. 262 of his classic work on "The Diseases of the Heart and the Aorta" he gives the history of the illness of Mr. Colles, the eminent Dublin surgeon, as an example of this form of disease. On post-mortem examination the condition of his heart was found to be as follows: "The heart was much larger than natural, but not proportionably increased in weight; its left cavities were collapsed and flaccid, while those of the right side were distended with dark blood, especially the auricle. The surface of the organ was of a pale-brown colour; the quantity of fat upon it was much greater than natural; its muscular tissue—pale, soft, and greasy—was easily ruptured. The left ventricle did not contain any blood; its cavity was remarkably large, but there was no hypertrophy of its parietes; it presented an example of great passive dilatation; the left auricle was also empty; the auriculo-ventricular openings were natural and the same may be said of the aortic orifice. At the attached margin of one of the valves there was a small particle of calcareous matter; it was not as large as the head of an ordinary-sized pin, and in no way interfered with the due exercise of the functions of the valve. Water poured into the cavity of the aorta did not enter the ventricle, the lining membrane of the aorta was stained of a deep-red colour, and several atheromatous depositions were observed beneath it. Numerous globules of oil were seen floating upon the surface of the blood, which collected in the chest during the examination of the heart." It is evident that this must have primarily been a case of fatty infiltration and degeneration of the heart, leading to a consecutive dilatation, and that the congestions and effusions which were found in other parts of the body were secondary to the primary cardiac failure.

It is well known that tobacco, tea, coffee, and alcohol are common causes of palpitation, and especially when these are taken immoderately by dyspeptic, anæmic, or neurotic patients in whom palpitation is a frequent complaint, even sometimes when the use of these stimulants or sedatives is not indulged in. Frequent attacks of palpitation will induce a true dilatation; for while laborious and well-sustained work, with due nutrition, will cause a hypertrophy, rapid and intermittent contractions, with insufficient nutrition, must lead to degenerative changes and consequent dilatation. The same laws apply to the cardiac as to the systemic muscles, and the same results follow regular and irregular working. A lady about sixty years of age has consulted me during the past three years for frequent attacks of palpitation, which come on suddenly, are very severe, and not infrequently continue for from thirty to thirty-six hours at a time, when they either pass off spontaneously or are cut short by an opiate. They are evidently neurotic, for domestic matters certainly have great influence over them whilst moderate exertion never causes them. During the last few months, however, decided signs of cardiac failure are becoming manifest and dilatation is obviously now taking place, and a soft systolic murmur has recently been developed. In the cases of exophthalmic goitre which I have examined marked evidence of a dilated heart has been forthcoming, and I think that in most cases the murmurs that are so commonly audible in this disease are only rarely to be attributed to structural lesions of the valves, but are more generally caused by the irregular contraction of the ventricles which necessitates an irregular tension on the curtains of the valves. In a patient recently in Cheere Ward, King's College Hospital, cold compresses to the thyroid gland and over the cardiac area (with pounded ice in the compresses) and the internal administration of arsenic, digitalis, and ergot, have made a remarkable difference in the patient. This is the more satisfactory as the patient was a male (in whom Graves' disease is by no means common), and his family showed an unusual proclivity to this affection, for a father, two brothers, and a sister all suffer from the same disease. The kidneys were typical examples of the granular form of Bright's disease.

In referring to the cases of dilatation which are consequent on some obstacle in the path of the circulation I need not detain you long, for striking examples are thoroughly well known to all of us, and the course of events in such cases is a matter of everyday experience. If a valvular lesion exists, and the nutrition of the body in general and of the heart in particular through its coronary system is good compensatory hypertrophy of the muscular walls takes place, and it is only when the compensation becomes inadequate that the symptoms of dilatation are seen. We should have the same phenomena of hypertrophy and dilatation if, instead of a valvular lesion, any other permanent impediment existed in the course of the circulation. I will refer only to two special cases—viz., athletes and renal dropsy. The connexion between athletics and heart disease is a very important one. In my experience among students at King's College and in many other young athletes I have not infrequently seen cases of dilatation of the heart obviously caused by undue athletic exercises. I have consequently been obliged to insist on a discontinuance of such exercises in football players, runners, gymnasts, and oarsmen. In some cases my patients were men of great physique and well-known athletes. There were amongst them two distinguished football players and one very rapid runner, and I am informed that these branches of sport are specially liable to produce a severe strain upon the heart walls and the circulation. Their first symptom of cardiac failure was shown by palpitation or by a fainting fit after a hard game or a closely contested race. There is always some form of irregularity of the heart's action, and occasionally there has been slight hæmoptysis. The apex-beat is displaced, and the first sound is too short and sharp and the pause is frequently prolonged, although if there is hypertrophy also, as is not infrequent, the first sound may be prolonged or reduplicated. In many of such cases there has also no doubt been an excessive use of tobacco, occasionally of alcohol, and not infrequently they have been complicated by intermittent hard reading and late hours, all of which must have contributed to the breakdown. In fact, training by fits and starts, idleness and irregular habits between the periods of training, and the occasional hard reading which is compulsory on students who have to pass examinations are all factors in the production of this form of cardiac failure. The same condition is well known in soldiers as the "irritable heart," and I have seen it particularly well marked in some sailors. With rest, suitable tonics, and by observing due hygienic laws the heart becomes quieter and the patient is able to do a fair amount of work and feels well, but a certain degree of dilatation nearly always persists and has to be taken into consideration when the line of life-work which has to be subsequently chosen is under consideration. The relation of the condition of the heart to renal dropsy has been brought into special prominence recently by a discussion on Dr. Dickinson's paper on Renal Dropsy, with especial reference to the Circulation, read before the Royal Medical and Chirurgical Society of London. It was maintained by Dr. Pye-Smith, Dr. Douglas Powell, and Sir W. Broadbent, and accepted by the writer of the paper, that the late dropsy in chronic renal disease was essentially cardiac and not really renal in origin, and that "the whole affair," as Sir W. Broadbent expressed it, was due to the "giving way of the left ventricle." It will be at once evident from an inspection of the specimen of a heart which I now show from a man aged twenty-seven, in whose case there existed considerable œdema of the legs, as well as hæmorrhages into the eyelids under the conjunctivæ and in the retinæ, and who died from well-marked uræmia, that a simple hydraulic explanation like this will not account for a renal dropsy. The hypertrophy of the muscle wall has made it of more than double the normal thickness, as shown in this section, and the perfect condition of the striation of the muscle fibres, as seen under the microscope, cannot but

d sprove any suspicion that the œdema in such a case as this c an be attributed to, or explained by, a cardiac failure. Mere mechanical explanations of the phenomena of renal dropsy, whether early or late, are insufficient to account for its incidence and distribution, or its variable increase and decrease, and as yet, I think, we are without any hypothesis that covers the whole of its varied clinical characters.

Among the symptoms of cardiac failure I have not specially mentioned the pulse variations, and I have so far avoided doing so because they are far from characteristic. The pulse is always weak—that is to say, it is a low-tension pulse, and the blood stream is easily arrested on pressure;-but it may be abnormally slow—thirty to forty per minute or even less—or it may be rapid, irregular, or even intermittent. There is one absolute characteristic: it is never a pulse of high tension, whatever its rapidity may be. In most cases of arhythmia, tachycardia, and bradycardia which are not merely temporary we have either to deal with a neurosis or with a more or less pronounced dilatation, and the diagnosis becomes all-important. In cases of dilatation even of the acute form, coagulation of the blood in the cardiac cavities may rapidly take place, especially on the right side of the heart. As a result an embolus may be forced into the pulmonary artery or its smaller branches, and causing an immediate or rapid breath with urgent dyspnœic symptoms, although air freely enters the alveoli. I have seen one sad and sudden case of this form of acute pulmonary embolism, and some most striking instances are recorded by Sir George Johnson in his "Medical Lectures and Essays."

The treatment of cardiac failure may be summed up as follows: (1) physiological rest to the organ as complete as may be possible, and carried out in due relation to the severity of the symptoms; (2) general constitutional measures to improve the nutrition of the body in general; (3) special cardiac tonics to improve the work of the heart itself; and (4) the relief of symptoms in other organs—which are generally caused by a local congestion or stasis due to the impaired circulation. I shall only very briefly refer to a few of our chief remedial agents under these heads. Complete rest and quiet have a marked effect on a dilated heart, and the more marked the symptoms the more striking are their results. I often prescribe no drug for a hospital patient with a dilated heart until he or she has been in the wards for ten days or even longer, unless urgent symptoms are present, and the benefit of the rest is often extraordinary. I am sure that much of the praise awarded to different drugs in the treatment of cardiac failure should be given to the rest which is coincident with their exhibition. Not only should we insist on ordinary rest, but we should carefully warn every such patient against hurry, outbursts of temper, worry, and many other things which seem to be mere trifles. Stooping to put on or take off boots, straining at stool, ascent of hills, and every physical exertion inducing strain, must be carefully guarded against. In severe cardiac palpitation and dyspnœa a hypodermic injection of morphia, from ¼ to ½ gr. doses, administered by itself, or, better, with a dessert- to a table-spoonful of brandy given just before or at the same time, gives marvellous relief and is beneficial even in cases of true angina, although here the nitrites have frequently to be resorted to. The portability of the latter is a great advantage, for the onset of the angina is usually sudden. Spirit of ether in 15 to 30 minim doses or a few drops or an occasional whiff of chloroform are most valuable in dyspnœic attacks. The general measures include a generous diet, unless the digestive system is impaired. From one pint to one and a half pints of milk can usually be well taken daily, either diluted with soda, magnesia, or lime or lithia water, boiled, or treated with digestive fluids. With this there should be a fair allowance of the more digestible meats and but little of vegetables or fruit. Too long intervals between the taking of food are especially to be deprecated. A little bitter ale or two glasses of good claret or burgundy may be taken daily at meals if divided between luncheon and dinner. The milk is best taken between the meals, and some should be taken on rising, perhaps flavoured with weak tea. In severe cases and in old people nourishment at night is imperative. The stomach should never be full and never empty. The general tonic medicines which seem to me to act most advantageously are arsenic, iron, and strychnine, and a pill in which these are combined may often be taken for months with great benefit. The special cardiac tonics should begin with the only really reliable one, digitalis, which may be added to the above pill or given separately or in combination with other drugs. Iron and digitalis form an everyday prescription. I rarely give more than ten minims of the tincture or one drachm and a half of the infusion three times daily; but I give it for prolonged periods, as in these doses I have never seen any so-called "cumulative" action. Its especial value seems to me to be due to its slowing power over an irregular and rapidly beating heart, so that more blood can accumulate in the cavities between each contraction, a firmer beat then takes place, and a larger amount of blood is expelled at each contraction, leading to a more regular and better filled arterial pulse and a more orderly and efficient circulation. I have never found digitalis to be of any value in cases of slow-beating heart (bradycardia), unless this is due to uncompensated aortic disease; but it is our best drug when the heart is beating rapidly and irregularly, and the more marked these phenomena the more efficacious will be the result of administering the drug. Strophanthus occasionally acts well and may be used in those cases in which digitalis disagrees with the patient, but it cannot be relied on like digitalis. I have tried it in numerous cases of cardiac failure of every kind, but I have generally been disappointed. I have also tried convallaria majalis, adonis vernalis, and mercurialis annua, but without the slightest advantage, although recently these have been much vaunted as cardiac tonics. For the relief of the special symptoms, which are often most complained of by the patient and which distress the weakened heart, an adequate knowledge of the patient and his habits, as well as of the use of food and drugs, is required. In bad cases venæsection occasionally saves the patient's life when cardiac failure is due to engorgement of the lungs, as in emphysema, bronchitis, and cyanosis.

A man aged forty-six years was admitted to the Seamen's Hospital with urgent expiratory dyspnœa; he had been suffering from bronchitis for three weeks. The face was intensely cyanosed and the pulse full, tense, and bounding. On the night of admission six ounces and a half of blood were removed from the arm by venesection. The relief which followed was rapid. Within a few minutes the urgency of the dyspnœa had passed off and the face had resumed a more natural hue. The patient was afterwards treated by the methods usually adopted and recovered. Another patient aged fifty years was for nearly two years an inmate of the Seamen's Hospital. He was suffering from fibrosis of the lungs, and not long after admission appeared to be dying, with symptoms of extreme cyanosis and urgent dyspnœa; the right heart was much dilated owing to the obstacle which was met with by the pulmonary circulation. Whilst it was being discussed whether venesection would be of benefit the patient had a severe attack of hæmoptysis, losing from twelve to fifteen ounces of blood, which brought with it almost immediate relief to the urgent symptoms which were threatening life. On several occasions during the course of his long illness hæmoptysis recurred and was always attended with similar benefit. Venesection was once resorted to, but late in the case, and consequently there was no great benefit derived from it. The post-mortem examination confirmed the diagnosis of fibrosis of the lungs.

Palpitation is often due to gastric or intestinal trouble and aperients with stomachics then do much good. Nux vomica, ipecacuanha, aloin, and capsicum in pill, with a saline aperient, are often of use after effervescents, bismuth, and lime water have failed. Insomnia is best treated by food at night and by a slight stimulant of small doses of opium or morphia. Sulphonal or paraldehyde is occasionally very valuable, especially if renal or pulmonary complications are also present and forbid the use of morphia. Hæmoptysis, unless very great, will usually cease spontaneously; moreover, we have no direct styptics, whilst it often is of value in relieving cardiac distension, and is best combated by external applications of cold. Ice externally applied and slight saline purgation are generally all that are required. If the urine sinks below the normal in quantity or is loaded with litbates and becomes albuminous (and it should always be examined for signs of concurrent Bright's disease) digitalis is the best remedy, and then it is often combined with squill and blue pill. Citrate of caffeine, citrate of lithia, iodide and bicarbonate of potassium, acetate of potassium and scoparium are our other most valuable diuretics, but hydragogues or puncturing the legs will often more efficiently relieve the renal stasis than any diuretics. At bedtime small quantities of hollands, gin, spirits of juniper, or spirits of nitrous ether given as hot grog will often act as efficient diuretics and will also induce sleep.

For the dropsy hydragogue cathartics should be given,

and I find a combination of ten grains of scammony, eighteen grains of bitartrate of potash, and two grains of ginger preferable to the more commonly prescribed compound jalap powder. Sulphate of magnesium in half-ounce doses on alternate mornings is often well borne, or a corresponding dose of any of the natural purging waters may be given. Elaterium in doses of $\frac{1}{15}$th to $\frac{1}{12}$th of a grain is occasionally most valuable, but the quality of the drug and its action are both uncertain. If such remedies as digitalis, diuretics, and hydragogue cathartics fail to relieve the dropsy the legs should be punctured. I prefer to make two or three incisions in the neighbourhood of the ankle under proper antiseptic precautions to either the longer incisions occasionally made or the numerous punctures which must be made when Southey's tubes are inserted. If the incisions are properly attended to, and antiseptically washed and dressed by a nurse well trained in the use of antiseptics, there is very little risk of erysipelas or gangrene. The relief derived from the removal of the fluid in some cases can scarcely be over-estimated and it often considerably prolongs the life of the patient.

HÆMORRHAGE FOLLOWING TONSILLOTOMY; ITS CAUSES AND APPROPRIATE TREATMENT.

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HÆMORRHAGE occurring after removal of the tonsils, and the appropriate surgical means of dealing with it when severe, are of great interest and importance to the members of the medical profession and have at various times been subjects of discussion among them. *Per se*, the operation of tonsillotomy is quite a simple procedure, entailing but slight pain, if any, and being in almost all cases devoid of danger or unpleasant consequences to the patient; the conditions for the relief of which it is performed, however, though serious to the general health of the patient, are not of such gravity as to imperil life, consequently a dangerous hæmorrhage following so simple an operation is brought into special prominence when it occurs by virtue of its immediate danger to the life of the patient, as well as by its grave remote effects. As far as can be gathered from the literature published on the subject, and also from what one sees personally in the throat departments of the various hospitals, anything like a dangerous or even very severe hæmorrhage is of rare occurrence, and I am of opinion that the dangers of tonsillotomy have been by some authorities greatly over-estimated and that serious accidents due to it are distinctly rare. Sir Morell Mackenzie in many thousand tonsillotomies is said never to have had an accident, and Mr. Lennox Browne with an equal experience has had only two slight accidents. Capart has seen but one serious hæmorrhage in more than 2000 tonsillotomies, and, according to the Annual of the Universal Medical Sciences,[1] out of a collection of cases amounting to some 20,000 tonsillotomies only nine cases of hæmorrhage are recorded. In none of these was it fatal, and in many not severe. Indeed, Delavan has stated that there is no recorded case of a fatal issue after the use of the guillotine for simple hypertrophy of the tonsils. Dr. J. Wright, of Brooklyn, has published[2] a table of cases of hæmorrhage occurring after tonsillotomy, being a search of the records of the previous twenty-five years in the library of the Surgeon-General, Washington, and amounting in number to thirty-one cases. In more than one-third of them ice, direct pressure to the bleeding surface, or torsion of a spurting vessel was sufficient to check the hæmorrhage; in two cases the common carotid was tied; in three cases the patient was hæmophilic; in two cases vomiting set in and stopped the hæmorrhage; and in another case, after styptics, direct pressure, and Paquelin's cautery had been used without any success—the stump of the tonsil was tied *en masse*, and the bleeding ceased. Many of these cases were very severe and in two cases out of the thirty-one had a fatal issue. These latter are reported by Broca and are the only fatal cases I am aware of that have been recorded; in one of them no details are given, and in the other, a child aged eight years and a half, there was an abnormally distributed internal carotid artery. As Sajous[3] very truly remarks: "When Mackenzie, Browne, Schroetter, Gouguenheim, Krause, Massei, and Capart together report about 20,000 tonsillotomies, with but seven cases of hæmorrhage, Schroetter having stated that his two cases were not serious, thirty-one cases of bleeding would represent at the same ratio about 88,500 tonsillotomies—certainly a strong argument in favour of an operation productive of so much relief." Dr. Felix Semon[4] mentions a case of severe hæmorrhage after tonsillotomy, a Mackenzie's tonsillotome having been used. The patient was a man aged forty-six, with large chronic enlarged tonsils, and the bleeding, which was abundant, was stopped by direct digital pressure. This was the first case that had happened in Dr. Semon's practice after an experience of several hundreds of tonsillotomies. He again mentions[5] another case of hæmorrhage in a female aged twenty-three, whose tonsils were enormously enlarged. They were removed by him with a Mackenzie's tonsillotome, and the operation was followed by uncontrollable hæmorrhage from the whole surface of the right tonsil. Tannic and gallic acid gargle, ice &c., and direct digital pressure all failed, and the bleeding eventually (in about two and a half hours) ceased spontaneously when the patient was put to bed and kept at rest. Mr. Arbuthnot Lane[6] has recorded a most interesting case which came under his care. A man aged twenty-one had his tonsil removed on Dec. 16th; at the time of operation and during the first few hours he lost about half a pint of blood; he lost the same amount on the 19th, and the bleeding recurred on the 20th, and continued in spite of local applications. On the 22nd he was in a dying condition and was taken to Guy's Hospital. Normal saline solution to the amount of about four pints was injected into the radial vein, and he reacted at once to the injection. Mr. Lane then tied the common carotid artery, and the patient made an excellent recovery. There was nothing in the man's history or in the condition of the incised area of the tonsil to account for the bleeding. The hæmorrhage recurred more than four whole days after excision of the tonsil. I have recently seen a similar case, notes of which I give later, in which the bleeding started four days from the date of tonsillotomy and was apparently caused by eating brown bread and butter. Fuller[7] has recorded a case in which the common carotid was ligatured for severe hæmorrhage following tonsillotomy, the bleeding having set in seven hours after the operation and having lasted for thirteen and a half hours; various measures had been resorted to for its relief, but without avail. In his case the ligation did not stop the bleeding, which eventually (three hours later) ceased spontaneously. Dr. J. W. Downie[8] has published a case of severe hæmorrhage in an adult which occurred in his practice. The patient had both his tonsils removed with a Mackenzie's tonsillotome, for chronic hypertrophy. Hæmorrhage was fairly free at the time, but nothing unusual. Six hours later a message was sent "to come at once, as patient was bleeding to death." Astringents, ergot, hazeline, all failed, and finally it was decided to tie the carotid, but before doing so the actual cautery was applied to a suspected bleeding point and fortunately stopped the bleeding. In THE LANCET many years ago[9] a case was reported in which Mr. Stanley ligatured the common carotid for hæmorrhage following puncture of an inflamed tonsil in a man aged twenty-four. The puncture was made on a Friday, and the patient was admitted on the following Monday, bleeding not having set in till then, when he lost about a pint of blood. Solid nitrate of silver was applied and acted efficiently at the time; a little later, however, the hæmorrhage recurred, and strong nitrate of silver solution was used, but unsuccessfully. Ice was then tried, and for the ensuing twenty-four hours there was but slight bleeding. At the end of this period a fresh hæmorrhage took place, and the common carotid was tied. The patient eventually died of brain mischief. The remains of an old abscess close to the tonsil were found. There was no wound of the internal carotid, and the only vessel given off to the tonsil was the tonsillar. Nélaton[10] has reported a

[1] 1891, vol. iv.
[2] New York Medical Journal, Aug. 20th, 1890.
[3] Annual of the Universal Medical Sciences, vol. iv., 1891.
[4] St. Thomas's Hospital Reports, 1882.
[5] Ibid., 1883.
[6] THE LANCET, April 30th, 1892.
[7] American Journal of Medical Sciences, 1888.
[8] Edinburgh Medical Journal, 1886.
[9] THE LANCET, 1859.
[10] Gazette des Hôpitaux, 1857.

case of hæmorrhage from tonsillotomy in a boy in whom the bleeding did not become troublesome till forty hours after the operation. It ceased spontaneously. Billroth[11] reports a profuse hæmorrhage after removal of the tonsil, which was only arrested by pressure on the carotid. He used a bistoury and attributed the bleeding to a wound of the faucial pillar by his knife. Liden[12] reports a case of tonsillotomy in an adult by means of a bistoury, which was followed by so severe a hæmorrhage as to demand ligation of the common carotid. He believed the bloodvessels to have been abnormal in their distribution. Personally I have performed tonsillotomy only in about sixty cases, and I have never had anything approaching a severe hæmorrhage. Lately I have had the opportunity of seeing three cases of hæmorrhage following tonsillotomy, two being very serious indeed. In two of the three cases it is noteworthy that the patients were children, being in one case aged fifteen years, and in the other, and much more serious, case aged only eight years.

Now it has been conclusively proved that severe hæmorrhage following tonsillotomy almost invariably occurs in adults, and so extremely rare is it in children that Bosworth[13] states "that he knows of no recorded instance where dangerous or even troublesome hæmorrhage has followed tonsillotomy in childhood, with the single exception of one reported by Capart.[14] In this case the galvano-cautery loop was used to remove the tonsil in a child eight years old; it was followed by hæmorrhage, which persisted for five days. Again Burnett[15] states: "This accident is so rare in children as hardly to deserve attention." Moure has reported a case of severe hæmorrhage in a child aged seven years, whose tonsils were much enlarged and were removed with the tonsillotome.

For permission to make use of the notes of the following cases I wish to record my best thanks to Mr. T. Smith and Mr. Howard Marsh, under whose care the patients were placed in St. Bartholomew's Hospital; also to Mr. A. A. Bowlby, who has charge of the throat department of that hospital.

CASE 1.—A girl aged eight years was admitted into Stanley Ward, St. Bartholomew's Hospital, on Sept. 12th, 1893, under the care of Mr. Howard Marsh, suffering from severe hæmorrhage following tonsillotomy and removal of adenoid growths. For the last three years she had suffered from dysphagia, snoring at night—especially lately—mouth breathing, and deafness. She seemed to be dull and did not take her food well. Her family history was good; there was no history of hæmophilia. On examination she was found to have large hypertrophied tonsils, and a mass of adenoid growths were observed. The patient herself was a healthy, well-nourished child. On Sept. 12th, under chloroform, both tonsils were removed in the surgery, as were also some adenoid growths. A Mackenzie's tonsillotome was used for the tonsils. The operation was followed by profuse hæmorrhage from the right tonsil, which was quite uncontrollable, styptics and pressure being tried without success. After losing a very large quantity of blood the hæmorrhage lessened and finally almost ceased of itself. The patient occasionally vomited during the day and ensuing night, bringing up clots of blood; she also at intervals expectorated a little blood. Her general condition was very bad; she was extremely pallid, with very feeble pulse; her breath was very foul, and she had sighing respirations. Late on the afternoon of the 13th (twenty-four hours after the tonsillotomy) the hæmorrhage recurred, and the child lost nearly a pint of blood. Her condition then became critical; she lost consciousness and had a slight convulsion; her pulse was hardly perceptible, and she had "air hunger." Her parents were sent for, as it was feared that the case might terminate fatally. Mr. Hogarth, Mr. Marsh's house-surgeon, put the child under an anæsthetic and made a thorough search for the source of the hæmorrhage. A large slough in the situation of the right tonsil was seen, and in the centre of it arterial hæmorrhage was noted. Paquelin's cautery was applied to this spot, and the bleeding was controlled. The child was very restless afterwards and had to be given morphia to keep her quiet. She was in so bad a condition that for some little time after the hæmorrhage had been stopped her life hung in the balance. Enemata of hot water and opium were ordered, and the bed ends were raised. The hæmorrhage ceased permanently, the slough eventually separated, and the patient made a steady recovery. Her mother was seen by the sister of the ward a short time ago (Nov. 15th) and informed her that the child was getting on well and beginning to recover her colour.

CASE 2.—A girl aged fifteen was admitted on Sept. 13th, 1893, into Stanley Ward, under the care of Mr. Howard Marsh, suffering from severe hæmorrhage following tonsillotomy and removal of adenoid growths. There was a history of eighteen months' yellow discharge from the nose as well as of six months' occasional epistaxis. On examination she was found to be suffering from chronic hypertrophied tonsils and adenoids; these were removed in the surgery under chloroform, Mackenzie's tonsillotome being used for the tonsillotomy. The operation was followed by very severe hæmorrhage, which was arrested by ice in the mouth. The patient was kept in one of the beds attached to the surgery for the night, but, being very anæmic and somewhat collapsed, was admitted into Stanley Ward on the following day. She rapidly improved and was discharged well on the 20th. There was no history of hæmophilia, and no apparent cause could be found for the hæmorrhage, the anterior faucial pillar being uninjured.

CASE 3.—A young man aged nineteen was admitted into St. Bartholomew's Hospital on Nov. 13th, 1893, and put under Mr. T. Smith's care in Rahere Ward, suffering from dangerous hæmorrhage following tonsillotomy. He had had hypertrophied tonsils of some duration and had been advised to go to the Central London Throat and Ear Hospital, Gray's-inn-road, where his tonsils were removed on Nov. 8th, a Mackenzie's tonsillotome being used; there was only usual slight hæmorrhage at the time. He went home and kept very quiet, and had nothing but fluids until the evening of the 12th, when he ate some brown bread and butter; this caused him some pain, but there was no hæmorrhage. At about 7.30 A.M. on the 14th, whilst in bed, he suddenly had an attack of very severe hæmorrhage and was attended to by his medical man, who ordered him jellies and cold drinks; but the hæmorrhage continued and did not actually cease until about 5 P.M. that day, when he was taken out of bed in a most collapsed condition and removed in a cab to St. Bartholomew's Hospital. He was admitted for the night into one of the surgery beds. At 3 A.M. on Nov. 14th he bled slightly. He was admitted at about 9 A.M. into Rahere Ward and was given half a pint of iced milk. The hæmorrhage thereupon recommenced, and the patient lost quite three-quarters of a pint of blood in about twenty minutes. His condition was considered to be very critical; he was extremely collapsed and so feeble that when he had been turned over in order that the source of the hæmorrhage should be traced it was deemed advisable to leave him in that position and not turn him back again. His people were sent for. The tannic and gallic acid mixture was applied to the surface of the left tonsil (the source of the hæmorrhage), and the bleeding was checked. He has had no recurrence, and when I last saw him a few days ago he appeared to be on the road to recovery. He is still very weak and very anæmic, and is kept on cold fluid food. The patient told me that, in his opinion, he lost from two to three pints of blood on Nov. 13th before he came to the hospital. There was no history of hæmophilia, and he had always enjoyed good health up to the date of the tonsillotomy. He had suffered from slight epistaxis in the summer months.

Remarks.—Cases 1 and 3 are both of very great interest in many ways. In the former the hæmorrhage, which was so severe as to be dangerous, occurred in a child aged eight, and, as I have already pointed out, this in itself is most rare and well worthy of record. In both cases a Mackenzie's tonsillotome, which I consider to be by far the best and safest instrument to use, was employed, and in both there was an absence of any abnormality of the vessels, or of wounds of the anterior faucial pillar, which might account for the hæmorrhage. Case 3 is also especially interesting, in that the interval between the tonsillotomy and the commencement of the bleeding extended over four days. In both cases the hæmorrhage was so severe as to cause grave anxiety for the life of the patient. In Case 1 an actual bleeding point was found, and in Case 3 the bleeding seemed to come from the whole surface of the eschar of the tonsil.

From an analysis of the cases of hæmorrhage after tonsillotomy which I have been able to collect, and which are mentioned in this paper, and from personal experience, I think the following conclusions may be formed: (1) that fatal hæmorrhage after tonsillotomy is almost unknown; (2) that dangerous

[11] THE LANCET, Nov. 26th, 1870.
[12] Schmidt's Jahrbuch, 1880.
[13] Diseases of Nose and Throat, vol. ii., p. 157.
[14] Transactions du Congrès International de Laryngologues, Milan, September, 1881.
[15] Diseases of the Ear, Nose, and Throat, vol. ii., p. 588.

hæmorrhage is very rare; (3) that severe hæmorrhage, requiring styptics, direct pressure, &c., is very far from common; and (4) that moderate hæmorrhage is very fairly common and generally ceases spontaneously. It is also an accepted fact that the bleeding almost invariably occurs in adults, that it is often secondary, and that in many of the recorded cases it has followed the use of the bistoury.

Causes of hæmorrhage after tonsillotomy. — In investigating the sources of hæmorrhage following tonsillotomy it will be found that the bleeding is usually traceable to some abnormality in the distribution of the bloodvessels of the tonsil. Of such abnormalities there may be mentioned (1) abnormal distribution of the ascending pharyngeal artery (said to have been wounded by Billroth while operating with a bistoury); (2) abnormally large tonsillar artery; (3) abnormal internal carotid; (4) large vessel in the anterior pillar of the fauces (a case of hæmorrhage from this cause is mentioned by Weir); (5) wound of a large venous plexus at the lower and outer border of the tonsil; and (6) large patulous arteries in the substance of the tonsil. In connexion with the anatomy of the ascending pharyngeal [16] Lefferts has pointed out that in certain cases it has been found to come off from the internal carotid within the first inch of its course. Wyethe has found this relation to exist in seven out of 120 dissections of the parts he has made. Its bearing on the ligation of the external carotid for persistent and dangerous hæmorrhage from the tonsil is apparent and explains why the hæmorrhage may still persist after the ligation, thus requiring ligature of the common or internal trunk. Amongst other causes of hæmorrhage may be mentioned hæmophilia, over-use of the voice, or the too early eating of solids. Age in connexion with the subject has already been adverted to, as well as the fact that the recorded cases of severe hæmorrhage have occurred very frequently after the use of the bistoury.

There are certain classes of cases that would induce the operator to choose some other means than a cutting operation in his treatment of enlarged tonsils, and they fall under the following headings: 1. Cases of hæmophilia. 2. Cases with abnormalities of the vessels, apparent or suspected. Quite recently I saw in Mr. A. A. Bowlby's clinic at the Throat Department of St. Bartholomew's Hospital a child who was brought up for treatment for enlarged tonsils and adenoids; the left tonsil and left half of the palate were the seat of a large nævus. 3. Flat and deeply situated tonsils, or where the glands are very large and grow down the side wall of the pharynx. I do not propose to deal with the various methods that may be employed in such cases to rid the patient of his trouble, but I would point out that, taking into consideration the fact that hæmorrhage after tonsillotomy, when severe, occurs almost invariably in adults, some authorities recommend a cutting operation only in children. Thus, Dr. Semon [17] states as his practice: (1) that if the patient is under twenty, and enlargement of the tonsils is transverse, he performs the cutting operation; and (2) that, local conditions being the same, but the patient over twenty years of age, he gives him the option of tonsillotomy and galvano-cautery, and that if the tonsils are large and productive of serious consequences, and are entirely concealed behind the palatine arches, he uses the galvano-cautery, whatever the age of the patient.

Rice, [18] in cases where he apprehends hæmorrhage, uses a dull tonsillotome and pushes the blade slowly through the tonsils. The use of the galvano-cautery, it must be remembered, does not ensure absolute immunity from hæmorrhage, there being records of several cases of severe hæmorrhage occurring after removal of the tonsils by the galvano-cautery. My own experience has been limited entirely to the tonsillotome, I having used, at first, Matthieu's instrument, but I now employ that of Mackenzie. The latter instrument I consider to be the best in every way, and certainly the safest to use. I think I am correct in saying that in the large majority of tonsillotomies performed in the throat departments of the London hospitals Mackenzie's tonsillotome is used, and that a cutting operation is preferred to a bloodless method. Yet there are many cases in which, either from the size or situation of the tonsil, apprehended hæmorrhage, or refusal of the patient to consent to a cutting operation, some other method must be employed, and personally I would give the preference in such cases to the galvano-cautery.

Treatment.—Should the surgeon be so unfortunate as to meet with a severe case of hæmorrhage following excision of the tonsils—and it is an accident that he should always bear in mind and be prepared to deal with—what are the methods that may be adopted to control it effectually? In the large majority of cases there is no very great difficulty in dealing with the bleeding, especially in adults, who are more likely to keep quiet and follow the directions of the surgeon. It is as well to remember that a large number of the recorded cases of serious hæmorrhage have been secondary, and that a somewhat free hæmorrhage at the time of operation is not to be looked upon with too much alarm. I also believe that most cases have a tendency to cease spontaneously. Should it seem to the surgeon that the hæmorrhage is more abundant than is usual, the patient should be quietly reassured, kept perfectly quiet, and not allowed to use the voice at all, and he may be given small pieces of ice to hold in his mouth. Should the bleeding persist, the gallic and tannic acid mixture (one part gallic acid and three parts tannic acid) may be sipped by the patient or applied freely by the surgeon to the bleeding surface of the cut tonsil; these were the means adopted in Case 3, in which there was very dangerous hæmorrhage, and they were perfectly successful. Should these means, however, fail, it is my opinion that no good, but rather harm, will be done by trying any other forms of styptics, such as perchloride of iron, ergot, hazeline, &c. I would proceed, therefore, to make a thorough examination of the parts and attempt to form a differential diagnosis as to the source of the bleeding. Usually it will be found in a single bleeding point, which is generally the tonsillar artery. This bleeding point should be isolated and twisted with torsion forceps. Cases in which this method was successful have been recorded by Dr. G. M. Lefferts (three cases) and Clinton Wagner. [19] Or Paquelin's cautery may be applied to the spurting vessel, as was successfully done by Mr. Hogarth, Mr. H. Marsh's house surgeon, in the very alarming hæmorrhage occurring in Case 1, the notes of which I have given. Should the bleeding proceed from the whole cut surface, direct digital pressure (this method is very trying both to the surgeon and to the patient), or pressure by means of instruments, such as Clendinnen's, [20] or by an ordinary pair of long forceps, the blades being covered with lint, the one blade being applied to the cut surface and the other to the side of the face, close to the angle of the jaw, may be tried and is often successful. Usually the employment of such means as torsion, thermo-cautery, or pressure, digital or instrumental, necessitates the use of an anæsthetic, especially in children. Other methods that have been tried, and with success, are recorded by Clarke, Butler, and others. In Clarke's case [21] there was partial excision of both tonsils in an adult, a volsellum and angular scissors being used; the hæmorrhage was very severe, and, styptics, pressure, and Paquelin's cautery having all failed, the patient was finally put under an anæsthetic, and the stump was ligatured *en masse*. The bleeding was most effectually stopped. Butler [22] in his case drew out the stump with a tenaculum, transfixed it with a needle, and ligatured with silver wire. This was perfectly successful. Failing these various expedients, there remains, as a last resource, ligation of one of the carotid vessels. Before undertaking so grave an operation I should be inclined to try what digital pressure on the common carotid would do, though it is extremely difficult to apply pressure on that artery for any length of time; the collateral circulation is also so free that the bleeding might not be checked by the pressure applied to it, though the whole of the blood flowing through the vessel is arrested. In Fuller's case ligation of the common carotid did not stop the hæmorrhage from the tonsil, and this was evidently owing to the free circulation through the circle of Willis from the opposite side. It having, therefore, been decided to ligature one of the carotid vessels—and in my opinion this is the only measure left—the question arises as to which vessel should be ligatured, the common or the external carotid. I have no hesitation in saying that should I at any time be called upon to ligature the common or external carotid vessel for tonsillar hæmorrhage or penetrating wounds about the angle of the jaw I should undoubtedly tie the external carotid in preference to the common carotid. As regards

[16] Archives of Laryngology, New York, vol. iii., 1882.
[17] St. Thomas's Hospital Reports, 1883.
[18] New York Medical Record, 1891.

[19] Dr. Wright's table of cases of Alarming Hæmorrhage after Amygdalotomy. New York Medical Journal, August, 1890.
[20] Described in the New York Medical Gazette, vol. x. 1883.
[21] New York Medical Journal, July 7th, 1888.
[22] Ibid., Nov. 2nd, 1889.

tonsillar hæmorrhage, the chief blood-supply for the tonsils comes from branches given off by the external carotid, and that vessel should be tied between the superior thyroid and lingual branches. As Mr. Harrison Cripps has pointed out, in half the cases of ligature of the common carotid death is due to brain mischief, and in a large number of cases to recurrent hæmorrhage. Cases occur, to which I have already referred, in which the ascending pharnygeal arises from the first inch of the internal carotid, and, should the bleeding come from branches of the ascending pharyngeal, ligation of the external carotid would not check the hæmorrhage, and it would be necessary to tie the internal carotid or common carotid—preferably, I think, the former. Mr. Treves[23] has advocated occluding the external carotid temporarily by exposing the artery in the usual way and passing round it a thick piece of soft catgut. This is tied in a very loose loop. By pulling upon the loop the circulation through the vessel is at once arrested, but is immediately restored when the tension upon the loop is relaxed. He applied this method in four cases of severe hæmorrhage from wounds about the neck, and in three instances it was perfectly successful; in the fatal case, that of a child aged three years, he ligatured the right common carotid, but, hæmorrhage recurring, he placed a loop of catgut around the left carotid, and traction upon this stopped the bleeding permanently. The patient did not, however, rally from the effects of the former hæmorrhage. This method seems to me to be well worthy of further trial and would be very applicable to cases of tonsillar hæmorrhage not controllable by any other means than ligation of the external carotid. I take it that it must be very exceptional indeed to have to resort to ligature of the carotid in cases of hæmorrhage from tonsillotomy, as ice, direct pressure, torsion of a bleeding point, or the thermo-cautery are usually successful in stopping the bleeding.

Finally, I would, at the risk of repetition, emphasise the fact that tonsillotomy is nearly always a safe and satisfactory operation and very rarely followed by dangerous or even severe hæmorrhage, especially in children; that the surgeon should, however, always bear in mind the possibility of alarming hæmorrhage occurring and should be prepared thoroughly to deal with it; and that for almost all cases, both in adults and children, removal of hypertrophied tonsils with Mackenzie's tonsillotome is applicable and gives the most satisfactory results. I have also to offer my best thanks to Dr. de Havilland Hall and Mr. A. A. Bowlby for valuable references in connexion with this paper.

Welbeck-street, W.

STRICTURE OF THE URETHRA TREATED BY WATER PRESSURE.

BY CHARLES J. SMITH, M.R.C.S. ENG. &c.,
FORMERLY SURGEON TO THE FARRINGDON DISPENSARY.

SURGEONS, and perhaps more particularly general practitioners, from time to time find themselves face to face with cases of strictured urethra, that offer complete opposition to all efforts made for their relief. Such cases are usually most urgent and distressing. The plan pursued with two patients as detailed below will, I think, commend itself, as it is evident that though no instrument may be passed the pressure exercised at the first attempt is sufficient to obtain an amount of dilatation that allows the subsequent hot-bath treatment to afford a marked relief to the overcharged bladder and, thus enabling both the patient and surgeon to tide over a most trying, if not perilous, condition, eventually permits successful catheterism even where speedy operative interference appeared to be inevitable.

CASE 1.—In September, 1889, Dr. Ramskill kindly sent me a patient for treatment who had been the subject of urethral stricture for nearly thirty years. He had become so bad that at the time I first saw him he had for days only been able to void a few drops of urine with the most painful effort. In attempting to pass a catheter I found it impossible to introduce even a catgut; so, directing him to take a hot bath and endeavour to gain relief to his bladder, I left him for the time being. Later he had managed to obtain a certain amount of relief. I, therefore, arranged to see him in my consulting-room on the following morning; but here I again found it impossible to get anything through the stricture. It occurred to me that I might try the effect of the pressure of a column of water. Fortunately, I had a Palfrey's vaginal douche at hand, and from this I detached the terminal tube and affixed the nozzle of a Thomson's bladder washing-bottle, which is provided with a stopcock. Raising the douche to the highest point I could gain in my room, and passing a blunt travelling catheter (railroad) down on to the stricture, I slipped the nozzle into its free end and turned the tap, meanwhile holding the catheter firmly in its place, continuing the water pressure for about half an hour, and now and then closing the tap in order to relieve the patient, who said that he felt that the water was finding its way into the bladder. At the expiration of the half-hour I directed him to try to pass urine. This he succeeded in doing to a certain extent and manifestly in a freer manner, though the dribble could scarcely be dignified by the term "stream." On the morrow I again applied the water pressure with marked result, and on the third day used it again, after which I was able to pass a French No. 1 catheter à boule and empty the bladder. The case was then duly conducted through the ordinary course of dilatation up to about No. 11 English.

CASE 2.—In December, 1891, Dr. Ramskill was again good enough to send me a case of urgent retention, using the expression as applied to the bladder simply. The patient had but recently returned from Africa in order to be treated for a long-endured stricture that had got beyond his own control. He came to my room in great agony, but I found it impossible to overcome the stricture. Remembering the success of the former case, I at once prepared my douche and applied the water pressure, but he could not bear it for more than five minutes. I ordered him to have a hot bath, and I saw him again on the next day. He had been able to dribble away, in a series of hot baths, sufficient to gain some slight relief, but was now in a state of terrible suffering. I tried No. 1 catheter and a catgut, but to no purpose. I therefore at once reapplied the water pressure, which he bore better, but still I could not pass even catgut, so I resorted to hot baths again. On the third day the same condition obtained, and the same measures were taken. On the fourth day he appeared to be worse, and his symptoms were really so urgent that I told him he must go home, so that I might operate upon him. While I was talking to him I kept up the pressure, and finally made one more trial with a No. 1 catheter, happily with success; it slipped in almost easily, and gave the patient much relief. The subsequent conduct of the case was easy and rapid, and he was able to return to Africa.

These cases so impressed me that I have never had a troublesome case since in which I have persevered in the attempt to pass a catheter if the stricture was difficult or offered much resistance. I invariably insert the traveller and turn on the water, and always with gratifying results, the catheter passing then without further trouble. There is no doubt that the water acts under pressure as an elastic wedge or dilator. The necessary apparatus for this treatment consists of a cistern, which may be either an indiarubber bag or a zinc box, capable of holding a quart of water, a length of flexible tube, and a nozzle provided with a stopcock; the nozzle will fit into the top of a soft catheter which terminates in an open end. The cistern must be raised to the highest point of the room, over the couch upon which the patient reclines; the catheter must be kept closely applied to the stricture; the water pressure is then to be effected by turning the stopcock, and can be put off or on according to the patient's toleration. It will be seen that I fitted up my apparatus with just the elements I had to my hand, and that it answered every purpose; but for the benefit of those who are inclined to make use of my method I have given instructions to Messrs. Maw, Son, and Thompson, who will be able to supply the want of anyone applying to them. In conclusion, I would ask such of the readers of THE LANCET as may try this plan of water pressure to kindly publish the results of their experience and their opinion of the process.

Craven House, Northumberland-avenue, S.W.

[23] Transactions of the Medical Society, vol. xi.

FOOTBALL CASUALTY.—A young man, during a game at Holywood, county Down, some time since, sustained an injury to his leg. The wound had partially healed, when blood-poisoning supervened, and he died, on the 3rd instant, from lockjaw.

GANGRENOUS ABSCESS OF THE LUNG; OPERATION; RECOVERY.[1]

BY PRIESTLEY LEECH, M.D. LOND., F.R.C.S. ENG.,
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ON Sept. 3rd, 1892, a man aged twenty-two consulted me about an abscess he said he had in his throat. He stated that he expectorated a good deal, and sometimes the expectoration smelt very badly. He was of medium height, rather thin, of a sallow complexion, and somewhat anæmic. The pharynx and oval cavity were normal, and nothing was discovered in the larynx on laryngoscopic examination. A cursory examination of the apices of both lungs revealed nothing abnormal. He was given a mixture containing iron and quinine and told to bring some of the expectoration with him. I saw him again on the 7th, when he brought a gill-pot more than half full of muco-purulent expectoration. This quantity he had brought up in twenty-four hours. The sputum was very viscid and flowed out of the pot in one mass, like the urine in advanced cases of cystitis. After a great deal of trouble and many inquiries I at last obtained the following previous history: On April 12th, 1892, he had a pain in his left side with quick and painful breathing. A medical man was fetched, who told him he had pleurisy. He was in bed for a week and at the end of three weeks went back to work. While ill he sometimes coughed up phlegm streaked with blood. After his recovery he still coughed and spat up phlegm, sometimes more, sometimes less. On June 15th he went home complaining of pain in his left breast and inability to do his work; the cough was worse, and the expectoration was greater in amount. Two days later (on the 17th) he coughed up with one effort nearly a gill-pot full of offensive phlegm of a very dark colour. The stench was so great that it was thought he had had a motion in bed. During the two following days he also coughed up offensive phlegm, but not to such an extent as on the 17th. He stayed at home for a month and then returned to his occupation. Since then he has coughed and expectorated more or less and never felt well. On Sept. 8th I made a thorough examination of his chest and found the following conditions. Its right side was normal, both anteriorly and posteriorly. On the left side, in front, the percussion note was normal as far down as the second rib, but here it became abruptly dull; the dulness in the parasternal line extended downwards until it merged in the cardiac dulness; in the mammary line it extended to the lower border of the fourth rib. Transversely, the dulness reached from the left edge of the sternum to the anterior fold of the axilla. Over this area of dulness vocal fremitus and resonance were abolished, and on auscultation the breath sounds were found to be very much diminished; no adventitious sounds could be heard. Posteriorly, on the left side, corresponding to the area of dulness in front, there was a portion of the lung over which there was impaired resonance on percussion, with diminution both of vocal fremitus and of breath sounds. At the extreme base of the left lung there was a similar condition. The rest of the lung was normal. The apex beat was in the usual position, and the cardiac sounds were normal. The rest of the organs were healthy, and he had not lost much flesh. A microscopical examination of the sputum was made, but no tubercle bacilli and no elastic fibres were found, but numerous pus corpuscles were present, and on one or two occasions crystals of hæmatoidin were discovered. The diagnosis rested between a gangrenous pulmonary abscess and a localised empyema, containing fetid pus, which had burst into the lung. The temperature was sometimes normal both morning and evening, but as a rule it reached 101° F. in the evening, being normal in the morning. On Sept. 10th he coughed up half a gill of blood-stained muco-pus having a very fetid smell. After this he improved somewhat, and the expectoration became less, until Oct. 14th, when he began to become worse. The expectoration became greater in amount, and the fetid smell again became very pronounced. Being convinced that I had to do with an abscess in the lung, I came to the conclusion that an operation was indicated, and so long as the abscess was discharging through the bronchus the patient was exposed to the risk of secondary abscesses in the lungs. Dr. Solomon C. Smith saw the patient with me on Oct. 7th and agreed with me that an operation was advisable. On the 8th, the patient being under chloroform, I made an incision two inches and a half in length over the third intercostal space on the left side. The centre of the incision was half an inch outside the mammary line and in the middle of the area of dulness. The incision was carried through the skin and the pectoral muscles down through the intercostal muscle, and then the needle of a small Dieulafoy's aspirating syringe was introduced to the depth of two inches and a half. The piston of the syringe was withdrawn as soon as the point of the needle was buried in the tissues. Nothing but a little frothy blood escaped into the syringe. The needle was again introduced some five or six times in various places, with the same result. The failure to find pus was very disappointing; but, feeling convinced that it was present if I could only find it, I sewed up the incision and then made another of the length of an inch and a half in the second interspace, with its centre half an inch outside the left mammary line. The needle was again introduced in the centre of the incision, but no pus was found. However, on introducing it a quarter of an inch externally to the first puncture, a drachm and a half of horribly offensive pus was obtained. The stench was so great that my fingers smelt during the whole day, in spite of frequent washings with carbolic lotion. The syringe was detached, leaving the needle *in situ*, and the incision was deepened so as to cut through the pleura, which was adherent. Lister's sinus forceps were introduced, closed along the needle, and then opened, and a portion of a female celluloid catheter three inches and a half long was introduced, and the forceps were withdrawn. The wound was dressed with iodoform and wood-wool pads. During the administration of chloroform the patient coughed up some fetid pus and also some blood. He was at first weak through loss of blood and sickness following the anæsthetic. The catheter was replaced on the second day by an india rubber drainage tube a quarter of an inch in diameter. The expectoration decreased until Oct. 18th, when it began to increase in amount and also became fetid. The patient was directed to lie in the prone position for a portion of the day in order to encourage drainage, and every time the wound was dressed he, while the tube was out, turned on his hands and knees and cleared the sinus and cavity as much as possible by coughing and blowing with the mouth closed. On Oct. 26th iodoform was introduced along the drainage-tube into the cavity by filling the end of the drainage-tube with iodoform and then clearing it by pushing it out with a probe. The next morning the temperature was 102°, and he suffered from troublesome cough and expectoration of frothy mucus. The lung was dull quite to the tip of the left apex from pneumonia. After this the patient gradually improved; the expectoration became less, did not smell, and was more mucoid in character until the beginning of January, when on several days pieces of sloughing tissue were coughed out of the sinus. On Jan. 25th, 1893, I was called out at 4 A.M. and found that the patient had coughed up from eight to ten ounces of bright-red blood. There were intense dyspnœa and some cyanosis; rhonchi were heard on both sides of the chest; some of the blood he coughed up afterwards smelt badly. At 12 noon he was much better, and on the next day he was out. On Feb. 1st there was no more hæmorrhage. The expectoration was less. There was some difficulty in introducing the tube owing to contraction of the sinus; the patient was gaining in weight. On March 3rd he went to Blackpool, the tube still being in. The next day he coughed up some more blood, which smelt badly. During the following week the expectoration lessened a great deal, and a smaller tube was introduced as the sinus had contracted. On April 14th the tube could not be introduced, and as the expectoration and discharge had ceased for ten days I did not attempt to use it. Since this time he has remained in good health and has gone back to his duties.

Remarks.—There can be no doubt, I think, that the abscess was the consequence of localised gangrene of a portion of the left upper lobe. The illness which he had in April, 1892, was no doubt pneumonia associated, possibly, with some pleurisy. Whether gangrene occurred then is very doubtful, and I think it is much more likely that some chronic pneumonia persisted in the left upper lobe, and that some time

[1] A paper read before the Leeds and West Riding Medico-Chirurgical Society, where the patient was shown on Dec. 1st, 1893.

later the vitality of this portion of the lung became so much lowered that gangrene ensued, caused possibly by some thrombosis of the vessels supplying the affected portion of the lung. There is no history of any foreign body having gained entrance into the lung, and none was found to have escaped subsequently by the wound on the external surface. The diagnosis rested at first between a gangrenous abscess and a localised empyema which had burst into a bronchus. Phthisis was excluded by the seat of the lesion, as the apex itself was free and the posterior apex was not affected; and Drs. Ewart and Kingston Fowler have shown that tubercle in the great majority of cases begins in the apex and follows a well-defined route, nor were tubercle bacilli at any time found in the sputum. The impaired resonance and diminished breath-sounds at the extreme base of the lung on the same side were due, no doubt, to some thickening of the pleura. There were none of the so-called classical signs of a cavity in this case; the signs were simply those of consolidation. At no time could crepitations or other moist sounds be obtained, even after coughing; the breath-sounds were simply diminished. Another interesting point about this case is the situation of the abscess in the upper lobe of the left lung. Dr. Coupland[2] has described a considerable number of cases of abscess of the lung, and of thirty-eight cases there was not a single one of abscess in the left upper lobe. In the same paper he says that the majority of abscesses follow acute croupous pneumonia. Some three or four years ago I saw a very similar case to the one I have just described. The patient was a young woman twenty-two or twenty-three years of age and complained of vomiting matter and blood, which smelt abominably. On my inquiring into her history she told me that some four years before I saw her she had had an illness with acute pain in the left side, for which she was poulticed. She recovered somewhat slowly, and some time afterwards she coughed up some yellow matter and blood, which nearly choked her. This attack was preceded for a day or two by a feeling of illness, and for a few hours before the attack she had a feeling of suffocation. On examination the right lung was found to be normal, but in the upper lobe of the left lung, at the front, there was a patch of dulness extending downwards from the first rib to the lower border of the third rib, and over the same area there were diminution of the breath sounds and almost total absence of vocal fremitus; no crepitations or other adventitious sounds could be heard. Posteriorly over the left scapula there was impairment of resonance over an area corresponding to the dull area in front. The clavicular and supra-clavicular regions in front were normal both on percussion and auscultation. She had four similar attacks at intervals of some months, and on every occasion the matter and blood which were coughed up smelt very badly. Between the attacks there was no cough or expectoration, but for a day or two previous to each attack she had a dry, ineffectual, teasing cough, and when this occurred she said she knew she should cough up some more matter. It is now more than eighteen months ago since she coughed up any blood or pus, and when I saw her recently I was agreeably surprised to find that the dulness had disappeared and that the respiratory sounds were almost normal. There can be little doubt that this was an abscess of the lung which only opened into a bronchus when a sufficient amount of pus had collected. The patient's health between the attacks was good, so that I did not advise any operation.

The surgical points on which I would lay stress are: 1. In a chronic case the pleura, as it was in the case related at the commencement, is probably adherent; in an acute case an incision ought first to be made so as to see whether there is adhesion between the parietal and visceral layers of the pleura, because if any fetid pus should escape into the pleural cavity it could not fail to set up most intense septic pleuritis.[3] 2. One should not be satisfied with one puncture of the needle, but try in another spot if the first attempt to find pus fails. Mr. Godlee[4] mentions several cases where the site of the abscess was missed at the first attempt. 3. Operation is not justifiable unless the patient is losing ground. Abscess of the lung may recover spontaneously, as in my second case. 4. After the drainage tube has been introduced, the patient should lie in a position favourable for drainage and should be persuaded to clear away any secretion that may collect by blowing at intervals with his mouth and nostrils closed. This relieves the cough. In the case above described the expectoration did not suddenly lessen in amount after the opening of the abscess, as has been the case in several reported instances, and this was probably due to a loculus of the abscess cavity being situated at a lower level than the opening of the drainage tube. This also accounts for the great length of time the patient took to recover. 5. Another point on which I would lay emphasis is this: the patient should go to the seaside as soon as possible. In our manufacturing towns with their dust- and smoke-laden atmosphere any lung lesion is constantly subject to irritation from the more or less impure air which the patient breathes. Even a stay of two or three weeks makes a wonderful difference in his condition, and this was well marked in my first case.

King Cross, Halifax.

[2] Brit. Med. Jour., vol. ii. 1885.

[3] See Dr. Coupland's paper mentioned above and R. J. Godlee, THE LANCET, March 6th and 13th, and April 2nd and 9th, 1887.

[4] Loc. cit.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF INTERSTITIAL TUBAL PREGNANCY SUCCESSFULLY TREATED BY ABDOMINAL SECTION.

BY LAWSON TAIT, F.R.C.S.,
CONSULTING SURGEON TO THE BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN ETC.

IN connexion with this case one of those coincidences occurred which are so startling as to be almost incredible. On the morning of Oct. 22nd last I was engaged in examining a preparation sent to me for opinion by Mr. Harry Lupton of Stratford-on-Avon which proved to be an interstitial tubal pregnancy removed from the body of a patient who had died from intra-peritoneal hæmorrhage, when there was carried into my consulting-room on a stretcher a patient from Wellingborough sent to me by Mr. Saunders. She was thirty-eight years of age, had been married fifteen years, and had had four children—the last one three years ago. She had menstruated regularly and without trouble from the cessation of her last lactation up till July last, when her period went on for three weeks. Again in August and September it went on for five weeks, and after that she saw nothing. She was attacked with severe pain in the left side at the end of August and noticed a lump in the left groin early in September, since which time the lump had grown and the pain had steadily increased. She had been confined to bed since the beginning of September. When I saw her on Oct. 22nd she looked extremely ill, and a large mass occupied the pelvis and bulged up towards the left side. It fluctuated and gave the impression of being embedded in the broad ligaments and as if the uterus was spread over the right side of it. The mass did not extend quite up to the umbilical level. The patient's skin was dry and rough, her tongue was foul, and her temperature was high, so that I diagnosed the case as one of suppurating cyst of the broad ligament and advised immediate operation. I opened the abdomen next day and as soon as I had entered the peritoneal cavity recognised the fact that the conditions were new to me. The tumour was certainly covered by uterine tissue, and, while the uterus could not be discovered independently, it became evident, from the normal relation of the uterine appendages on the right side and the abnormal position of those of the left, that the tumour consisted of an enlargement of the posterior and upper wall, for the left ovary and tube were raised up and brought quite forwards. I punctured the mass just behind the advanced left cornu, but nothing came through the trocar save a little putrid serum, very highly coloured. I therefore enlarged the opening with my fingers and turned out a large quantity of offensive blood-clots with placental and fœtal débris. I cleared a quantity of adherent placenta from the wall of the cavity, this proceeding being accompanied by severe hæmorrhage, which was controlled by sponge pressure. Passing my finger up the vagina to the cervix, I found that it could easily enter an enlarged but perfectly empty uterine cavity, and then I easily confirmed my suspicion that the case was really one of interstitial tubal pregnancy in which the fœtus had died, and therefore the cyst had not ruptured. I washed out this

cavity and the peritoneum with great care, and closed the wound with a glass tube reaching to the bottom of the cyst. The patient made an easy and uninterrupted recovery, and went home on Nov. 14th last. The interest of the case lies in the circumstance that, as one of interstitial tubal pregnancy, it is of great rarity and it constitutes the first instance in which surgical assistance has anticipated the rupture and the patient's life has been saved. I have said in my "Lectures on Ectopic Pregnancy" that I thought it very unlikely that anyone would ever have such an opportunity, and I do not think that I should have been so fortunate in this instance but for the circumstance that the fœtus had died and the process of suppuration was making enough constitutional disturbance to demand interference. The usual fate of the primary rupture was thus avoided, a rupture by the slower process of suppuration was substituted, and thus time was saved by the warning given.

The Crescent, Birmingham.

ERYTHEMA NODOSUM IN A MALE ADULT.

By J. G. M'NAUGHT, M.B., C.M. GLASG.,
SURGEON-LIEUTENANT, ARMY MEDICAL SERVICE.

A SERGEANT aged twenty-six years was admitted to hospital on Dec. 2nd, 1893, suffering from chronic inflammation of the inguinal glands, not venereal in origin. On Dec. 9th he complained of pain in the elbow-joints and knee-joints. Next day he still complained of pain. None of the joints complained of were swollen and the pain was not very acute. On examination an eruption was noticed on his legs, extending from just above the knees to the ankles. It consisted of raised patches of a rose-pink colour; on the front of the legs the patches were oval in shape and from 1½ in. to 2 in. in length, the long diameter being parallel to the tibia. In the neighbourhood of the knees the eruption consisted of smaller, rounded patches. He stated that the eruption was painful and it was distinctly tender to the touch. The larger patches felt distinctly nodular. The patient had never suffered from rheumatism, but his mother is subject to it. He stated that he had never had syphilis, and no evidences of his having suffered from that disease were found on careful examination. On the evening of the day on which the eruption appeared his temperature was 102·2° F. His temperature remained elevated for a week, the following being the readings on successive evenings—102°, 101·8°, 102°, 99·2°, 99·2°. The eruption became darker in colour and gradually faded, leaving behind it patches of livid discolouration exactly like that resulting from a bruise. He remained free from fever and pain from Dec. 16th to the 22nd, when he again complained of pain in the elbow-, finger-, knee-, and ankle-joints. The left ankle-joint was distinctly swollen, but the other affected joints were unaltered in shape. Together with the articular pains an eruption exactly similar to that already described reappeared, but this time its distribution was more extensive, reaching from the ankles to the hips. The pains in the joints were somewhat more severe on the second occasion, and the feverishness more pronounced. The evening temperatures from Dec. 22nd were as follow: 101·8°, 102°, 102°, 102°, 100·6°, 100·2°, 99·8°, 98·6°. The eruption ran a similar course to that of the one first noticed. As Dr. Hilton Fagge states in his work on the "Practice of Medicine"[1] that erythema nodosum when it affects males almost always appears in boys about the age of puberty, I thought this case of its occurrence in an adult male worthy of record.

Curragh Camp.

DIPHTHERIA AND ITS CAUSATION.

By H. GRANT SUTTON, M.D. ST. AND., M.R.C.S. ENG.,
MEDICAL OFFICER OF HEALTH FOR THE SITTINGBOURNE AND MILTON RURAL DISTRICTS.

As so little, comparatively, is known as to the origin of diphtheria, and the results of careful observers (though accepted for a time) are often in the end discarded as not altogether satisfactory, I can quite understand that the views I entertain as to one cause of this disease will be received by some with reserve; still, any facts that tend to throw light upon its origin will, I believe, be acceptable. In the parish of Upchurch, in the Milton union sanitary district, large quantities of refuse from the London dustbins are brought down by barges and shot upon a quay, very few houses being contiguous. Immense heaps, some 15 ft. high and many yards long, are thus deposited and after some months are sifted for the sake of the contained ashes, which are used for the purposes of brick-making, which is a large industry in this neighbourhood; the residue, consisting of decomposing animal and vegetable matter, rags, woollen materials, old chair seats, feather beds, and all kinds of rubbish and filth, is then burnt, the stench being abominable. These masses of refuse lie smouldering for weeks, and though the gases are volatilised their poisonous properties are not destroyed, and so these noxious fumes are carried in the direction favoured by the wind, one of which would probably be over the village where diphtheria did actually occur.

On March 25th, 1892, in a cottage at a higher elevation than the rubbish in question, and situated some 150 yards distant, two children were simultaneously taken ill with diphtheria. On April 5th a child living in an adjoining cottage developed the first signs of the same malady and may have been infected by its sick neighbours or by the rubbish emanations. On the 6th a young man living some 500 yards away was also sent to the isolation hospital suffering from diphtheria; he, however, had had no connexion whatever with the first two infected dwellings or their inmates. On the 8th another case appeared near the house first infected, which, like the second, may have originated from direct infection from another sick person or from the contaminated atmosphere. The village of Upchurch stands high; the cottages are well built, scattered, and very wholesome; the drainage is in good order, and there is a large air space around the dwellings. After due inquiry as to the origin of the first and subsequent cases, and on finding no other reason for the outbreak, I came to the conclusion that these cases (at any rate the first and third) of diphtheria originated in the deleterious emanations generated in such immense volumes and were "air-borne," especially as there was an utter absence of proof, or even suspicion, of direct personal contagion, and no evidence pointing to schools as the cause. I am fully of opinion that this disease originates with insanitary conditions, especially foul nuisances. I may add that each case as notified was removed to the isolation hospital, otherwise it is most probable that many others would have been attacked.

Sittingbourne, Kent.

A CASE OF ANILINE POISONING.

By FRED. J. SMITH, M.D. OXON., F.R.C.S. ENG.,
ASSISTANT PHYSICIAN TO, AND LECTURER ON FORENSIC MEDICINE AND TOXICOLOGY AT, THE LONDON HOSPITAL.

THE following notes of the symptoms in a case of aniline poisoning were supplied by Mr. T. E. Bowkett:—"On Wednesday, Dec. 13th, 1893, I was called to see a woman forty-two years of age, of alcoholic tendencies. The history, as ascertained afterwards, was that at 1.40 P.M. she had swallowed about three ounces of marking ink, the greater part of which consisted of aniline. No immediate symptoms appeared, but after a little while a friend noticed that she looked ill and helped her up to bed, and then the patient rapidly became unconscious. I saw her with Mr. A. Corner at 3 P.M., when her condition was as follows. The lips were of a dark purple, the general surface of the skin was deadly white, with a slight bluish tinge; the conjunctival reflex was present, the pupils were small, with very sluggish and slight reaction to light; the breathing was slightly stertorous and the pulse was full and slow, 60 per minute; there was feeble twitching of the muscles of the fingers of both hands. The stomach was thoroughly well washed out with several quarts of warm water, ether was injected subcutaneously, and the inhalation of oxygen also tried; the condition improved a little, but the patient never recovered consciousness and died almost exactly twelve hours after the poison was taken." Mr. Bowkett was kind enough to ask me to be present at the necropsy, which was postponed for my convenience till thirty-two hours after death. Rigor mortis was still present; there was no noticeable peculiarity about the colour of the corpse,

[1] Vol. ii., p. 934.

which was that of a well-nourished woman. On opening the brain, fluid blood of an ordinary dark colour escaped freely, and a slight excess of fluid was noticed in the ventricles. The lungs were slightly congested, but otherwise perfectly natural. The heart was relaxed in all its chambers and they were empty as regards blood, the only noticeable feature in that organ being a very peculiar bluish-green appearance which was to be very distinctly seen through the visceral pericardium when looking at the surface, but the blood in the vessels of the heart itself showed in mass no change of colour. There was very slight erosion of the lower end of the œsophagus, but none in the stomach or intestines. No trace of disease was discoverable in any viscus. Cases of poisoning by aniline are sufficiently rare to warrant placing the above on record. In the absence of vomiting the symptoms were unusual, but the insensibility, deepening into coma and only relieved by death, was in accord with other cases. I had no means at hand of testing the spectrum of the blood, but the peculiar colour of the heart suggests that the spectrum would have shown the bands of methæmoglobin usual in such cases, and yields corroboration of the idea that aniline in the blood is changed into some coloured body.

Christopher-street, E.C.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. MARY'S HOSPITAL.

GANGRENOUS HERNIA; A CASE OF PRIMARY AND ONE OF SECONDARY RESECTION OF INTESTINE.

(Under the care of Mr. H. W. PAGE.)

IT is an unsettled point in surgical practice how best to deal at the time of operation with a piece of bowel which has become gangrenous in hernia. Should it be left alone and be dealt with afterwards, or should it be resected there and then? It is often difficult to say whether a knuckle of strangulated gut has or has not actually passed the limits of recovery, and frequently the surgeon has been surprised to see restoration of the circulation and returning vitality of the loop even when appearances had been altogether adverse. Statistics, however, have been adduced to show that the mortality from primary resection is in reality less than that from secondary; but it ought to be remembered that the success of resection depends very largely on the state of the gut, and that the rate of mortality of primary resection is materially affected if, as is highly probable, the operation has been done in cases where gangrene would have been averted by simple relief of the strangulation. Until this source of fallacy can be excluded it will be better, perhaps, to disregard statistics in deciding on the course of procedure in any given case and to allow full weight to the circumstances and conditions of the case itself. In the two cases recorded below, the gut was absolutely dead at the time of operation. The first of them, a case of primary resection, is not related as such, but rather as an instance of a singular accident which befell the operator, who, by reason of the extent of the gangrene both of the sac and bowel, and the obliteration of all distinction of the parts, performed a resection without at the moment knowing it, and that, too, at a time when the condition of the patient absolutely forbade such a serious step.

CASE 1.—A woman sixty years of age was admitted to hospital on March 10th, 1888, in a state of extreme collapse. On March 1st she had felt something give way when straining to lift a weight; but although she called in a medical man to attend her for abdominal pain and constant vomiting it was not until the 9th that a swelling was mentioned or discovered in the right femoral region and that taxis was used. When she came to St. Mary's Hospital there was a right femoral hernia the size of a walnut, red and very tender. The usual incision through much inflamed tissues exposed, as it was thought, a black, gangrenous sac, and this was accordingly opened. No fluid escaped, nor had any escaped before; there was no fæcal matter to be seen, nor was there any fæcal smell. Exploration with the finger failed to discover any gut in this supposed sac, and as the neck of it had been previously freed by incision its emptiness was looked upon as being due to the contained bowel having slipped back into the abdomen. Mr. Page therefore proceeded to place a ligature round it as high up as possible and cut it off in the ordinary way. The absence of any fluid when it had been opened had led him to suspect something unusual about it, and examination very soon revealed that what had been thought by those who saw it to be a gangrenous sac was in reality gangrenous bowel, and that a resection had been performed. The incision was therefore immediately prolonged through Poupart's ligament, and the ends of the divided gut were found lying *in situ*. Strange to say, owing doubtless to the extreme degree of collapse, there had been neither bleeding nor escape of fæces, and without further trouble or delay the two ends were put in apposition and sutured by the Czerny-Lembert method. The condition of the patient was an absolute bar to any further time being spent in making a fresh section of the gut in order to allow of the sutures being passed through perfectly healthy structures, and it is certain that more or less rotten tissues were brought into apposition. The woman died two hours afterwards.

Remarks by Mr. PAGE.—At the necropsy the line of suture was found to be watertight, perhaps the only good thing to be said of the case; nevertheless, I have thought it better that it should be published. We learn by our mistakes, and, although I do not think that in any future case of a similar kind one would be any better able to distinguish various parts made all alike by gangrene, yet there is an obvious risk that in such conditions bowel may be mistaken for sac. When, therefore, the state of the patient is such as to forbid any prolonged operation relief of strangulation and protection of the peritoneum are all that the surgeon should attempt. This instance of failure of primary resection must not be quoted, therefore, as telling against primary resection in suitable cases. It was not a suitable one and, as the history of dates has shown, by no possibility could a fatal issue have been averted.

CASE 2.—A woman forty-five years of age, the mother of sixteen children, came to St. Mary's Hospital on Oct. 7th, 1893, with a history that as she was walking in the street on the morning of the 4th a swelling had suddenly and unaccountably appeared in her right groin. On the evening of the 6th her medical attendant had failed to reduce this swelling—which then only had been suspected to be a hernia—under the influence of an anæsthetic and advised her to go to the hospital on the following day. When she arrived she was much collapsed, having been incessantly vomiting most offensive, if not actually stercoraceous, matter. Her bowels had been constipated since the 5th. The region of the hernia, a small femoral one, was red, tender, and œdematous. The patient was immediately prepared for operation, and without further attempt at taxis the hernia was exposed in the usual way. The tissues outside the sac were in a nasty, inflamed condition, and it was no surprise to find, as soon as the sac was opened, that there had been escape of fæces. The hernia was of the small bowel and of Richter's variety, and there was found a small perforation at the centre of the protruding portion. An area around this orifice, of the size of a couple of postage stamps, was obviously gangrenous. The question was therefore at once considered whether it would be well to proceed to immediate resection or to establish an artificial anus. The state of the patient herself and the inflamed, septic, offensive condition of all the parts about the hernia led Mr. Page to regard the latter course as being the more advisable, a view shared by his house surgeon, Mr. Steegman, and by Mr. Crowle. All constriction outside the sac having, therefore, been divided, the gut was drawn down for further examination, and the deep furrow in it showed how tightly it had been nipped and held. The parts were then cleansed as thoroughly as possible, and a long strip of iodoform gauze was wound round and round the gut where it projected from the crural canal. In this manner the gangrenous portion of gut was kept well raised to the surface by a kind of collar, and it was believed that when fæces began to escape there would be perfect protection of the peritoneal cavity. The patient rallied nicely from the operation and was pretty comfortable on the following day. Fæces flowed abundantly as the black portion of bowel sloughed away and left

a large hole. The skin and deeper parts of the wound of course became much inflamed from the constant irritation of fæces, but in all other respects the woman was well and readily gave her sanction to the proposal that secondary resection should be carried out on Oct. 18th. Menstruation had prevented it being done earlier than this, the eleventh, day. The chief difficulty anticipated was to prevent soiling the peritoneum, because of the inflamed state and fæcal saturation of all the tissues. It was, therefore, determined to make thorough cleansing, both by scraping and irrigation, of the parts right down to the depths of the granulating wound the first step in the operation. This having been satisfactorily accomplished, the bowel, now firmly adherent to the canal through which it had escaped, was carefully separated, and temporary clamps were then placed on each side of the large orifice, while the vertical incision of the original operation was prolonged upwards so as to admit of more, unaffected, intestine being drawn down. These steps of the operation were conducted without difficulty, and some seven inches of gut having been drawn out Makins' clamps were applied, and the depths of the wound were plugged with sponges. Four inches of gut were next cut away at right angles to the axis, together with a triangular piece of the mesentery. Bleeding was stayed from both bowel and mesentery by fine catgut sutures, but was at no time of serious moment. The portions of the gut above and below the seat of the gangrene were markedly different from each other, for, while the gut above it was dilated and had its walls decidedly thicker than natural, the gut below was contracted, and its walls, though thicker than natural, seemed in comparison unduly thin. It appeared hardly credible that so much change could have taken place in so short a time. Notwithstanding the differences named, both in size and consistence, the ends were brought together and sutured by the Czerny-Lembert method with comparative ease. Especial care was exercised in uniting the edges of the divided mesentery so as to have peritoneal surfaces in apposition; while by cross sutures at the part immediately contiguous to the bowel the space where the vessels run in the mesentery was effectually closed. The clamps and protecting sponges were then removed, and the bowel was returned to the abdomen. There being no chance of union by first intention, no attempt was made to close the wound, and it was therefore plugged with a carbolised sponge. The patient bore the operation perfectly, and there is hardly anything to be said as to the after progress of the case. Her only trouble was from flatulent distension of the colon, which caused her so much pain that, contrary to what seemed prudent, it was necessary to give her a castor oil injection on the 25th and to follow it with a calomel purge a few days later. Both greatly relieved her, and by Nov. 6th her bowels were acting naturally every day. The wound closed, and there was never the least pain or indication of anything being wrong at the seat of the suture. The patient left the hospital on Dec. 9th perfectly well in every respect.

Remarks by Mr. PAGE.—It would be wrong to draw the conclusion that because secondary resection was successful it was the right thing not to have resected when the patient first came to the hospital. Her condition was bad, but by no means to be compared with that of the patient in Case 1, and it certainly could not be said that success from primary resection was altogether out of the question. In my mind practically the same remark applies to all these operations on gangrenous herniated bowel and to the statistics which have been founded on them. No two herniæ are exactly alike, but they all pretty well agree in this, that the longer the gut has been strangulated the worse is its condition locally, and worse also is the condition of the patient. The conditions of both, therefore, must be taken into consideration when the gut is first exposed. The state of the patient is of even greater moment than that of the gut and the surrounding parts. These can be purified and fresh, healthy bowel may be drawn down for suture after resection of the damaged coil, but it may be of infinite danger to life to increase or prolong the collapse even in the slightest degree. I take it, therefore, that each case must be judged as it occurs, and that where neither local nor general conditions seem to forbid it primary resection should be done. The thing of all others to be guarded against is shock, and here it seems to me that the surgeon will do well to make much less use of anæsthetics than is commonly the rule. Anæsthetics are most objectionable in collapse, but happily in collapse the need for them is small by reason of the dulled sensations which accompany it. With the exception of the incision through the skin and superficial parts, I doubt, from what one sees in many abdominal operations, whether there is much pain. Such pain as the superficial cuts may give might very readily and efficiently be prevented by the injection of a 2 per cent. solution of cocaine, and the profound depression of general anæsthesia be thus entirely avoided. Must it not be acknowledged that the anæsthetic is often largely responsible for the melancholy result described in the words, "the patient never rallied after the operation"? I say this because I feel that the surgeon ought to aim at primary resection whenever it is possible. What, however, ought he to do when primary resection is unattainable and a fæcal fistula must be formed? Some advocate that the bowel should be left *in situ* without relief of the constriction, which is left to protect the peritoneum from fæces, while others hold that the constriction should be divided and the gut drawn down. The latter course is the one which in my belief is unquestionably the better. The bowel may have been perforated or become gangrenous at the periphery of the strangulated loop, but there is grave risk of the same thing occurring at the actual seat of constriction if it be not relieved; and when this happens the adhesions may be quite insufficient to protect the peritoneal cavity as soon as the gut is to some extent released by the perforation and extravasation of fæces at the place where it has been nipped. There ought to be no difficulty in protecting the peritoneum after the constriction has been divided, and for this purpose the collar-like coil of iodoform gauze mentioned in the notes is perfectly efficient. Deep and protective adhesions will be found when the dressing is changed on the following day. There is yet another point on which opinions and practice differ. Should the resection be done at the original wound, or should a fresh median abdominal wound be made for the purpose? More room may no doubt be obtained for the manipulation of resection and suture at a fresh opening in the middle line, and the parts may perhaps be kept more easily free from fæcal contamination, but I cannot help thinking that there is risk in carrying the affected bowel from the seat of the hernia through the peritoneal cavity to the fresh wound, and that it is, moreover, unwise to make any wound through the abdominal parietes unless there is imperative need for it. With careful scraping and irrigation the parts at the site of the hernia may be perfectly cleansed before the resection is begun, and any difficulty in returning the bowel into the abdominal cavity at this place can be met by prolongation of the incision. One wound is surely better than two, and one operation is better than two. Primary resection thus becomes the ideal procedure; and for this other reason it is to be commended that none of the changes found in this second case—the dilatation of the lumen of one part of the gut and contraction of the other—can possibly be present to add to the difficulties in the work of suture. The only gain from delay in this direction is that some thickening of the bowel wall may make the suturing rather more easy than it would otherwise be.

SAMARITAN HOSPITAL FOR WOMEN, NOTTINGHAM.

A CASE OF PYOSALPINX DUE TO AN UNUSUAL CAUSE.

(Under the care of Dr. ELDER.)

"MOST cases of salpingitis are septic, the result of inflammations of the endo-metrium, gonorrhœal or puerperal. Some cases originate in leucorrhœa; a few are caused by syphilis; some are tubercular. Sanger has found actinomycosis as a cause of suppuration."[1] The very exceptional causation of the following case of pyosalpinx is alone a sufficient reason for placing it on record.

A single woman thirty-five years of age was admitted into the Samaritan Hospital for Women, Nottingham, on Oct. 11th, 1893, with the appended history. Last April, whilst on a visit to some friends at Lincoln, she felt very ill, and suffered from sickness, diarrhœa, and feverishness. Although these symptoms persisted she, on medical advice, went to Melton Mowbray towards the end of May as a housekeeper in a place of business. Her condition becoming worse, Mr. Willan was sent for and diagnosed the case as one of typhoid fever, with the result that for a month she was confined to her bed. The clinical features were those of enteric fever—viz.,

[1] Mr. Greig Smith: Abdominal Surgery, p. 135

feverishness, gastric and intestinal disturbance, successive crops of rose-coloured spots, abdominal tenderness and distension, and great general prostration. Towards the end of her stay in bed the left leg swelled, and in the left iliac region a somewhat prominent andr tender tumou appeared. When she began to get about the swelling interfered with her movements by the pain occasioned, although its size did not visibly increase much, and her recovery from this fever was only very partial. Most of her time was spent resting till she was admitted into hospital. The conditions then existing locally were as follows. Per vaginam the uterus was felt wedged against the pubis by inflammatory exudation, which occupied the pelvic floor behind, and in the left iliac region there existed an elastic, tender swelling which could be followed on to the hypogastrium. In addition to the pain and inability to get about the patient complained of a frequent desire to micturate, progressive loss of flesh despite her marvellously good appetite, and night sweats. During the week preceding operation (which had to be delayed owing to menstruation supervening) the temperature never rose above 99·8° F. There had at no time been purulent discharges from the bowel, vagina, or urethra. The case was diagnosed as one of probable pyosalpinx, and abdominal section was performed on Oct. 19th. On opening into the cavity the omentum—much thickened and indurated—was found plastered upon the pelvic contents, off which it was peeled without difficulty. Thus exposed, and occupying the main part of the pelvic cavity, there lay a fleshy looking, somewhat elongated and bulging tumour, evidently the hypertrophied left Fallopian tube, firmly adherent all round, but most seriously so to a considerable length of the small bowel. To have attempted enucleation would undoubtedly have been disastrous, so after protecting the general peritoneal cavity with sponge packed round I withdrew with an aspirator fifteen ounces of most offensively smelling pus and then made the abscess extraperitoneal by stitching round the opening, at the lowermost part of the parietal peritoneum, closing the upper part of the abdominal wound in the usual way. For the first four days drainage was effected by means of a glass tube, and for five days more by means of gradually shortened rubber tubing, using daily cotton wool soaked in tincture of iodine as a disinfectant to the sac interior. The wound, except where the tube was, healed by first intention, and this part soon afterwards granulated up, so that on the dismissal of the patient on Nov. 16th all of it had soundly united. Subsequently to the operation the temperature never rose above 99·2° or the pulse above 88.

Remarks by Dr. ELDER.—In the etiology of this case there is much to interest and instruct. As is well known, gonorrhœa and puerperal infection stand in the fore-front of causes of inflamed uterine appendages. This patient had certainly not been pregnant, nor was there any suspicion of gonorrhœa. The pelvic mischief was not antecedent to the fever, but came towards its close and owes its origin to it. As a result of peritonitis, with or without a minute intestinal perforation, adhesions were formed between the affected bowel and the Fallopian tube, leading to septic infection. This, I take it, is the most probable solution of this puzzling case.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Albuminuric Ulceration of the Bowels.—Abdominal Section for Acute Intestinal Obstruction due to Multiple Hydatid Cysts.

AN ordinary meeting of this society was held on Jan. 9th, Dr. CHURCH, Vice-President, being in the chair.

Dr. DICKINSON read a paper on Albuminuric Ulceration of the Bowels. He said that in the Croonian Lectures of 1876 he referred to the occurrence of ulceration of the bowel with the granular kidney, and he had since given further instances of the same association, with evidence in one case that the intestinal lesion was hæmorrhagic. The paper now before the society gave a number of additional cases, covering altogether the experience of forty years, and presenting a total of twenty-two examples in which ulceration of the bowel was coincident with, and presumably pathologically connected with, renal disease. Eight instances were appended as being of collateral interest, in which, under similar circumstances of renal disease the bowel was the seat of hæmorrhagic extravasation without ulceration. The ulcers were not confined to any one part of the bowel, though they were most frequent in the lower part of the ileum, nor were they especially associated with any of the glandular structures. The most marked character of the ulcers was their association with hæmorrhage, recent extravasation and pigmentation the result of extravasation being frequently to be seen in their neighbourhood, and in three cases where the specimens were subjected to microscopic investigation blood in various states of alteration was found in the submucous tissue in connexion with the lesion. Two cases were adduced in which the stomach was ulcerated as well as the bowel, in one the ulceration being associated, as in the bowel, with extravasation of blood. In the twenty-two cases of intestinal ulceration upon which the paper was based the kidneys were diseased in all; in fourteen they were granular—in two, large white. In nineteen of the cases hypertrophy of the heart was noted; in nine there was retinal hæmorrhage or exudation. Thus the albuminuric ulcer presented itself in company with other members of the cardio-vascular series to which it apparently belonged. The lesion mostly presented itself late in the course of the renal disease, and often brought about the fatal issue by means of peritonitis and perforation. The symptoms commonly present were griping, abdominal tenderness, diarrhœa, and vomiting. In a minority of cases no symptoms were to be observed.—Dr. HALE WHITE said that gratitude was due to Dr. Dickinson for having made this subject known to the profession. The fact that ulceration of the bowel was associated with Bright's disease used to be taught by Sir William Gull and by Dr. Fagge. He had himself been interested in the subject from another point of view, for he had investigated it from the intestine as the starting point. Of twelve patients who suffered from ulcerative colitis, four were found to have granular contracted kidney, while a fifth had suffered from gout. A further analysis of the twelve cases of ulcerative colitis revealed the fact that five of them had also ulceration of the small intestine, and of these five, two had granular kidney and one suffered from gout. In one of them there was ulceration of the stomach as well, and that was the male patient who had gout, though it was stated in the post-mortem record that the kidneys of this man were healthy. Perforation of these ulcers was common, and peritonitis was twice as common as perforation. When fatal, death was usually due to diarrhœa, exhaustion, or peritonitis. He therefore concluded that the albuminuric form of ulceration of the intestine was one form of ulcerative colitis. As to the causation of the ulceration his specimens did not support Dr. Dickinson's view, for he had seen in all his cases evidence of colitis extending for some distance round the ulcers, and he therefore regarded the hæmorrhage rather as an indication of the severity of the ulceration than as a cause of it. When extensive hæmorrhage occurred in other regions extensive ulceration did not follow—as, for instance, in purpura—and the epistaxis of chronic Bright's disease was not usually accompanied by ulceration. In a recent specimen which had been sent him from Trinidad of dochmium duodenale there were multiple hæmorrhages caused by the bites of the worms, but this had led to no ulceration.—Dr. MITCHELL BRUCE said that he had met with two cases of very profuse hæmorrhage from the bowel occurring in chronic Bright's disease. The first case was in a professional friend of his own who had two severe attacks of melæna and died later from uræmia. The other case was that of a patient who was admitted into Charing-cross Hospital with hæmorrhage from the bowel and he recovered sufficiently to be able to leave the hospital. In neither case, therefore, had he been able to prove the presence of ulcers. As to the frequency of the occurrence of ulceration, that must be a rare event. He inquired of Dr. Dickinson in what proportion of cases of chronic Bright's disease hæmorrhage occurred or an ulcer was found post mortem.—Dr. HERRINGHAM referred to a specimen in St. Bartholomew's Hospital Museum of ulcers of the stomach. They were of the size of the end of the little finger and the base of each was formed of a clot of blood. The specimen was taken from the body of a man who was said to have died from "cirrhosis of the kidneys." A second and similar specimen by its side had the same renal association. He agreed with Dr. Hale White that the ulcers were post-inflammatory

rather than hæmorrhagic erosions. In albuminuric retinitis the inflammation occurred first and the hæmorrhages later.—Dr. CHURCH said that he had not noticed the association of ulceration of the intestine with chronic Bright's disease, although he had frequently observed pigmentary changes in the intestinal tract. He asked in how many cases in the series amyloid disease was present.—Dr. DICKINSON, in reply, said that Sir William Gull might have known of the condition, but in the course of many conversations with him on the subject of renal disease he had never mentioned it. In his cases he had found no evidence of enteritis, and the hæmorrhages were very deep in the wall of the bowel, and there were hæmorrhages elsewhere in the bowel independently of ulceration. The ulceration was constantly associated with retinal changes and hypertrophy of the heart. Ulceration was rare, for it had only been met with in the post-mortem room at St. George's Hospital about twice a year. The pigmentation of the intestine was, he thought, due to hæmorrhage of old date. The lardaceous disease was accidental; it only occurred in one case, and was then due to an abscess which discharged for a year previously to death.

Mr. J. HUTCHINSON, jun., then gave the particulars of a case in which Abdominal Section was performed for Acute Intestinal Obstruction due to Multiple Hydatid Cysts, the cysts being removed and recovery resulting. The patient, a gardener aged fifty-three years, was seized with symptoms of acute obstruction three days before the operation. He had frequent vomiting, abdominal pain, constipation, hiccough, &c. No cause could be assigned, but both per rectum and through the anterior abdominal wall two hard tumours could be felt; further, there was a good-sized fatty hernia above the umbilicus, and the patient was sent to the London Hospital with the diagnosis of strangulation in this. The only point of importance in the previous history was the occurrence of ascites at the age of thirty, which was cured by a single tapping. On abdominal section Mr. Hutchinson found three hydatid cysts projecting from the peritoneum of the mesentery and extending in a row from the right of the umbilicus to the recto-vesical pouch, in which lay the largest of the three. They were of cartilaginous hardness and ivory whiteness, the largest being the size of a goose's egg and apparently impacted in the pelvis. It was, however, after enucleation of the other two brought up towards the wound and removed. There was remarkably little hæmorrhage throughout owing partly to the great age of the hydatid cysts. The cysts had walls one-third of an inch in thickness and contained numerous daughter cysts; they were in part calcareous. It was suggested that the attack of ascites twenty-three years previously gave the date of their deposit within the abdomen. The patient recovered from the operation satisfactorily. Attention was drawn to the subject of subperitoneal hydatids, the rarity with which they caused obstruction, and to other points of interest in the case detailed.—Mr. GODLEE had met with a case of hydatid cyst in Douglas's fossa which caused obstruction to the flow of urine and was relieved by tapping through the rectum. He had never before seen such thick-walled cysts containing living organisms.—Mr. MARMADUKE SHEILD asked whether the cyst was twisted on its pedicle. The case showed the power of nature in spontaneously curing hydatids. Operation on these cases, if attempted, had usually to be left uncompleted; there was much hæmorrhage and the result was unsatisfactory.—Mr. WALLIS wondered how the hydatids became planted in that position. As a rule, multiple hydatids of the abdomen were beyond operation, though it might be quite advisable to perform laparotomy for the relief of symptoms.—Dr. CHURCH said that the walls of the cysts were of unusual thickness and appeared to belong to the mother cyst. He quoted a case to illustrate the extraordinarily long duration of hydatids. Eighteen months ago a man entered St. Bartholomew's Hospital with a large abdominal cyst, which had been diagnosed as hydatid thirty-five years previously and had not varied in size since. He now applied for relief on account of abdominal pain. Mr. Willett incised in the middle line and opened the cyst; the contents were turbid, but not suppurating, and a few daughter cysts were found still white and transparent. It sprang from the under surface of the liver.—Mr. HUTCHINSON, jun., in reply, said he thought that the parasite was still alive at the time of the operation. Many cases of multiple subperitoneal hydatids had been seen among the deer at the Zoological Gardens. The patient was fortunate in having only three cysts, which could be readily removed. They were scarcely pedunculated and appeared to cause obstruction more by pressure. The lowest cyst had become jammed in the pelvis between the rectum and the bladder.

MEDICAL SOCIETY OF LONDON.

Multiple Ankyloses of Joints of Lower Extremities.—Use of Thyroid Gland in the Treatment of Diseases of the Skin.

AN ordinary meeting of this society was held on Jan. 8th, Dr. DE HAVILLAND HALL, Vice-President, being in the chair.

Mr. WILLIAM ANDERSON read a paper on a case of Acute Peripheral Neuritis, followed by Multiple Ankyloses with Muscular and Cutaneous Atrophy in the Lower Extremities. The patient, a boy aged fifteen years, was admitted into St. Thomas's Hospital on July 2nd, 1891. At the end of December, 1890, he returned home in a state of exhaustion after a hard day's skating, and when seen by his medical attendant two days later was found to be extremely prostrate, with a temperature of 103° F., and complaining of very severe pains in the lower extremities. In the course of a few days the knees and ankles became swollen, and the fever was associated with profuse perspirations. There seemed to be no impairment of consciousness. At the end of ten weeks the constitutional disturbance subsided, but nearly all the joints of the lower extremities were found to be ankylosed, and there was marked atrophy of the skin and of certain leg muscles. Under an attempt to move the rigidly extended joints the tightly stretched and inelastic skin of the left knee gave way, leaving a breach of surface that caused much subsequent trouble. On admission, six months after the beginning of the disease, he was greatly emaciated, but, except in the lower extremities, there was no other evidence of abnormality. The joints from the hips downwards were ankylosed, with the exception only of the subastragaloid joint in each foot; the skin was thinned and marked by transverse stripes of linear atrophy; there was defective sensibility to touch over the extensor aspect of the leg and the muscles supplied by the anterior tibial, peroneal, and portion of the posterior tibial nerves were greatly wasted and showed degenerative reactions under electricity. The special treatment adopted was a systematic course of massage and passive movement, and it was so far successful that in a few months the boy was able to walk fairly well with the aid of a stick. Considerable limitation of movement, however, persisted in some of the articulations. The disease was at first diagnosed by the medical attendant as acute rheumatism, but the subsequent train of symptoms negatived this view. The complete limitation of the joint trouble to the lower extremities and the later indications of localised impairment of sensibility and motion, with atrophy of the skin and of certain groups of muscles, suggested a primary nerve lesion—a peripheral neuritis probably determined by the combined influence of a functional overtax upon the motor apparatus (in skating) and a prolonged lowering of the temperature in the nerves and other structures of the exhausted limbs; but the most peculiar features of the case were the sudden and acute febrile onset of the symptoms and the widely disseminated joint lesions, from which only a single articulation in each lower extremity was exempt. Reference was then made to two cases of multiple ankyloses recorded by Dr. Pasteur and Dr. Barlow in the Transactions of the Clinical Society for 1889, and the differences between these and the case under discussion were pointed out. Discussion was invited as to the relation of the symptoms described to those of the acute rheumatoid arthritis of children.—Dr. DE HAVILLAND HALL thought that the abscess could not have formed as the result of simple friction unless the vitality of the patient had been very greatly lowered.—Dr. PASTEUR remarked that there were but few points of resemblance between the case under discussion and that brought by him before the Clinical Society, for in the latter instance all the joints of the limbs were affected and also the jaws. The patient in that case had been under observation since the publication of his paper and the scope of movement in the joints had gradually diminished.—Mr. LOCKWOOD held that some form of infection must have produced the extensive subfascial suppuration—the scars and moral thickening which were present bore witness to its severity. That cold would act as a predisposing cause of infection was well known, the experiments of Professor Pasteur on hens with anthrax cultures proving this. The hens were refractory to anthrax before they were exposed to intense cold, but they contracted the disease quite readily afterwards. He asked whether any fluid exudation from the joints had been examined. He had never seen a patient suffering from any form of infection in whose urine an abundant cloud

of albumen was not present, and in the sediment simple methods easily demonstrated the evidence of bacterial activity. The theory of infection would readily explain the peripheral neuritis which was present.—Mr. J. P. RICHARDS asked whether the illness had been preceded by influenza, for peripheral neuritis was often consecutive to that disease, and if it affected the spinal cord it might induce secondary joint changes.—Mr. ANDERSON, in reply, said that he did not think the cause was infection, for the abscess of the thigh only developed ten weeks after the commencement of the illness. The urine after admission to hospital contained no albumen. He thought much might be learnt if the cases were grouped together in which multiple arthritis was associated with changes in the muscles and skin. The patient had not suffered from influenza.

Dr. PHINEAS ABRAHAM gave the results of his observations on some cases of Diseases of the Skin treated with Thyroid Gland. He was led to make a trial of thyroid gland in diseases of the skin in consequence of the interesting results brought before the profession by Drs. Byrom Bramwell and Arthur Davies at the meeting of the British Medical Association at Newcastle-on-Tyne. He gave an epitome of the observations of these gentlemen, as well as of subsequent communications on the subject from Dr. Hartley, Dr. Leslie Phillips, Dr. Talfourd Jones, Dr. Balmanno Squire, and Dr. Gordon Dill. Of the seventeen cases of psoriasis treated with thyroid gland by these observers only seven could be regarded as definite successes. He did not consider the entire removal of the lesions of psoriasis, even in severe cases, in seven or eight weeks to be so very extraordinary, for he had seen similar results, and in a much shorter time, follow vigorous treatment with external tar applications. He commenced to employ the thyroid gland in the form of tabloids five months ago, and up to the present time he had prescribed them to about 100 patients; but as the notes of a few cases had been mislaid his observations referred to only ninety. Forty-two were patients at the Western Skin Hospital, thirty-seven at the Hospital for Diseases of the Skin, Blackfriars (Mr. Waren Tay's patients), seven at the West London Hospital (Mr. Bidwell's patients), and four others in private practice. Curiously enough, two patients with advanced nodular leprosy expressed themselves as feeling better after taking the tabloids, and there was certainly a rapid diminution of the febrile attacks with acute erysipelatous œdema. The usual dose he gave was three tabloids of five grains each per diem, and if unpleasant symptoms ensued they were reduced to two or even one. As a rule the patients seemed to prefer to take them after meals, but in those cases in which the remedy did good he found it made little difference whether it was swallowed on an empty stomach or not. He gave short extracts from the case-books of the 86 patients attending the above hospitals, and summarised the results. The tabloids had been administered in 65 cases of psoriasis, 5 of lichen planus, 7 of eczema, 2 of chronic urticaria, 5 of lupus, 1 of prurigo senilis, and 1 of a peculiar papular eruption which superficially simulated adenoma sebaceum. Of the cases of psoriasis, 17 might be discarded as being under treatment or observation for too short a time; in the remaining 48 some definite improvement was noted in 18, but only 7 of these latter were under treatment with thyroid gland alone; in 16 the result as regarded the eruption was practically negative, and in 15 there was actual increase of the eruption during the exhibition of the remedy; in 28 of the patients disagreeable symptoms were complained of, such as headaches, palpitations, muscular tremors, neuralgic pains, dyspepsia, &c. Of the 5 cases of lichen planus there was marked improvement in 3, but these patients also were under external treatment at the same time. Three complained of disagreeable symptoms. Of the 7 cases of eczema, 3, he believed, derived benefit from the thyroid tabloids, but they also were under simultaneous other treatment. Unpleasant effects were produced in 3 cases. Neither of the 2 cases of chronic urticaria derived the slightest benefit; the trouble, indeed, was rather increased. The patient suffering from prurigo senilis also derived no benefit; but the anomalous papular eruption certainly began to diminish after the patient commenced to take the tabloids, but this was also under other treatment. Two of the patients suffering from lupus showed improvement, but they also were under external treatment. It was obvious that the inquiry would have been more conclusive if all other medication had been discontinued while the patients were under the treatment. The fact was, many of the cases were already deriving benefit from the application of ointments and lotions, which they did not desire to discontinue; in others the external remedies were prescribed after futile treatment for a fortnight or so with the thyroid tabloids alone, and in some there was special indication for an antipruritic application. He was quite aware that his observations were fragmentary and imperfect, but he nevertheless hoped they would prove of some practical interest to practitioners who contemplated making a trial of the thyroid gland in diseases of the skin. In order to carry out a therapeutical inquiry of the kind in a thoroughly scientific manner the patients should be kept in a hospital under constant observation, with records of physical phenomena and with frequent examination of the fluids of the body. The conclusions that he thought might be deduced from his observations, and from those of others, were as follows: (1) that the ingestion of thyroid gland, although of specific therapeutical value in myxœdema and sporadic cretinism, had no constant effect in psoriasis and in many other diseases of the skin; (2) that in a large number of cases the results were negative and in a few the cutaneous lesions were aggravated; (3) that in a certain number—a minority—there was a distinct and marked curative effect; (4) that at the present time we had no prior indications as to which cases its administration was likely to benefit; (5) that in a considerable number of the patients disagreeable constitutional effects were induced; and (6) that age and sex had nothing to do with the success of the remedy. In future he intended to employ thyroid treatment only in cases which "hung fire" under usual methods or in those in which its use might be physiologically indicated. He thought that although the results had not reached expectations they were greatly indebted to Dr. Byrom Bramwell for having suggested the use of thyroid gland in skin diseases and for having further developed the brilliant researches scientifically initiated by Mr. Victor Horsley, and so successfully continued by Dr. George Murray and others.—Dr. DE HAVILLAND HALL said that *a priori* he would have expected thyroid gland extract to have benefited the squamous type of skin disease because it softened and rendered supple the dry skin present in myxœdema.—Dr. M. DOCKRELL thought that the observations would have been of greater value if they had been carried out without other treatment. Among the cases of psoriasis it was generally to the debilitated that the thyroid extract did the most good, and it was also more beneficial in children. For the latter, half a five-grain tabloid three times a day was sufficient, while in adults they might be administered up to nine tabloids a day. He usually gave a tonic while the treatment was being continued, because the drug was apt to produce a debilitating effect and be accompanied by a considerable elevation of the temperature.—Dr. EDDOWES had witnessed unpleasant symptoms develop in several patients, while in others where the progress had been slow under the thyroid treatment they had improved rapidly when this was abandoned and sulphur or tar preparations were used locally.—Mr. W. ANDERSON referred to a case of psoriasis in a man aged thirty-five, who had suffered from the disease on and off for thirty years and it had occasionally improved spontaneously. The patient was at first much benefited by treatment with thyroid extract, but after a relapse a persistent trial for three weeks only made him worse. The drug was then discontinued and he improved rapidly under a tar application.—Dr. HINGSTON FOX thought that it was very difficult to decide whether one thyroid gland was equal in strength to another of a different size, for observations made in the slaughter-house had shown him that they varied greatly in size. It would also be worthy of study whether there were any differences in the properties of the gland during the rutting season, for if such differences existed they would help to account for the discrepancies in the results obtained by different observers.—Dr. ABRAHAM, in reply, said that the tabloids which he used were equal in strength to an eighth part of a normal sheep's gland. He did not understand why the processes of digestion did not destroy the properties of this organic extract.

OBSTETRICAL SOCIETY OF LONDON.

Exhibition of Specimens.—Six more cases of Pregnancy and Labour with Bright's Disease.—Note on Vaginal Secretion.

A MEETING of this society was held on the 3rd inst., Dr. HERMAN, President, in the chair. The following specimens were shown:—Dr. CHEPMELL: Uterus and Vagina from a fatal case

of Septicæmia, showing point of infection.—Dr. WILLIAM DUNCAN: Hypertrophied Nymphæ and Clitoris removed by excision. Dr. PROBYN WILLIAMS: (*a*) Heart with only one auricle; (*b*) Hydrocephalus and Spina Bifida.—Dr. EDEN: Unruptured Tubal Gestation.

A paper by the PRESIDENT on Six more cases of Pregnancy and Labour with Bright's Disease was then read, of which the following is an abstract:—Case 1: Third pregnancy. Eclampsia with second labour and persistent subsequent albuminuria; third pregnancy beginning eleven months afterwards; œdema and short breath coming on in second month of pregnancy; arterial degeneration; cardiac hypertrophy; old retinitis; urine containing one-third albumen and casts; premature delivery at end of fifth month; no fits; slight diuresis following delivery; no marked diminution in albumen immediately following delivery, but some diminution following prolonged rest; percentage of urea much, and absolute quantity of urea somewhat below the average; no marked alteration in urea percentage accompanying delivery. Death six months afterwards. Case 2: Tenth pregnancy. Ill twelve months before delivery; urine containing half albumen; polyuria; deficient urea elimination; bronchitis; no retinitis. Labour induced in ninth month; death of child on delivery; persistence of bronchitis; diarrhœa; increased urea excretion and diminution of albuminuria following delivery; irregular slight pyrexia. Death a month afterwards. Chronic tubal nephritis. Case 3: Fifth pregnancy. Bone disease followed by amputation of thigh eleven years previously; œdema dating from fourth labour, four years previously; no other symptoms; anæmia; no retinitis; polyuria; urine containing half albumen, almost entirely serum-albumen; slight diminution of albumen under milk diet; urea excretion only slightly below normal; labour induced at eight months; child living; diuresis, increase of urea elimination, and still greater diminution of albuminuria following delivery; good health two years afterwards in spite of persistent albuminuria. Case 4: First pregnancy. Symptoms beginning towards end of seventh month; no retinitis; urine containing two-thirds albumen and casts; labour induced at end of eighth month; increase of albuminuria during labour; progressive diminution during lying-in; slight deficiency of urea elimination; slight polyuria before delivery; diuresis following delivery; child living; piece of placenta retained and removed on the ninth day; good health eleven months afterwards. Case 5: Second pregnancy. Symptoms three weeks before term; vomiting; diarrhœa; œdema; labour at term; lingering first stage accelerated by bougie; child living; urine containing casts and a quarter albumen; increase of albuminuria to one-half during labour; diuresis after delivery; diminution of albuminuria during lying-in; slight diminution in urea excretion; good health and freedom from albuminuria six months afterwards. Case 6: First pregnancy. Symptoms a week before admission; œdema; weakness; short breath; cardiac hypertrophy; urine containing one-third albumen; labour induced at end of eighth month; child living, no fits; slight deficiency of urea elimination; diuresis, increased urea elimination and diminution of albuminuria following delivery; good health a year and eight months afterwards. Having thus briefly described the cases, Dr. Herman went on to compare the first with others reported in former communications by him to the society (in all eleven in number), and then the eleven cases with twelve of puerperal eclampsia, also published by him in the Society's Transactions. From these comparisons he drew the general conclusion that there are at least two kinds of renal disease to which a pregnant woman is specially liable. One of these is a very acute disease, in which premonitory symptoms are either absent or of duration measurable by hours or days. It attacks chiefly primigravidæ. It often causes intra-uterine death of the child. It is attended with extreme diminution of the quantity of urine, and the small quantity of urine that is passed is greatly deficient in urea, but contains enough albumen to make it solid on boiling. This disease is accompanied with rapidly recurring fits. If it runs a favourable course the fits cease, then the urine increases in amount, and the percentage of urea therein rises. If the excretion of urea be not re-established the case quickly ends fatally. Such cases seldom, if ever, pass into chronic Bright's disease. The other is a disease which attacks older subjects, chiefly those who have previously had children. Its premonitory symptoms extend over a period of weeks or months. It often leads to intra-uterine death of the child. It is accompanied generally by increase in the quantity of urine, with copious loss of albumen, but not so much in proportion to the urine as in the more acute disease, and with diminution in the elimination of urea, but not nearly so great a diminution as in the more acute disease. Delivery is followed by temporarily increased diuresis and increase in the urea elimination. When this increase is considerable the albuminuria usually diminishes and disappears, and the patient gets well. When the increase is only slight the albuminuria persists, and the case becomes one of chronic Bright's disease. This form of disease is sometimes attended with fits, but generally not. The presence of albuminuric retinitis affects the prognosis unfavourably. When the pressure within the abdomen is greater than usual, the amount of urine may be diminished, but in such cases the diuresis and the augmentation of the urea elimination after delivery are proportionately greater. In the acute disease which causes eclampsia, and in the chronic disease when it is associated with excessive intra-abdominal pressure, much of the albumen is paraglobulin. The cases in which the albumen is mainly serum-albumen generally either die or pass into chronic Bright's disease.—Dr. CULLINGWORTH thanked the President not only for the paper just read, but for the series of which this formed the conclusion, the whole being of the highest scientific value. Numberless theories as to puerperal albuminuria and eclampsia have been propounded, but all more or less have failed to explain the phenomena. What was now wanted was not more theories but an unbiased and accurate clinical record of a series of cases. Dr. Herman's cases furnished such a record.—Dr. A. ROUTH mentioned two cases, one with retinal hæmorrhages in which the urine contained serum-albumen and the patient had epigastric pain. This patient had eclampsia, miscarried, and did well, the albumen disappearing in a month. The second patient had no retinitis, no epigastric pain, no eclampsia, and the urine contained paraglobulin. He (Dr. Routh) asked for information as to the significance of paraglobulin in the urine and as to epigastric pain, which he looked upon as an unfavourable symptom.—Dr. DUNCAN thought that when there was marked retinal disease the prognosis was much graver than when such a condition was absent. He mentioned two cases of pregnancy associated with albuminuria, in which there were kidney disease and well-marked albuminuric retinitis in both; he induced abortion, with the result that in one of the cases the retinal disease was much improved, but in the other the total blindness which existed at the time of emptying the uterus still continued two months later, when the patient left the hospital. He thought the uterus should be at once emptied when there was any indication of retinal mischief.—Dr. PETER HORROCKS said his own experience coincided with that of Dr. Herman regarding the gravity of retinal hæmorrhages in cases of eclampsia.—The PRESIDENT, in reply, said that Dr. Routh's cases were very interesting, and it was to be hoped a full account of them would be published. He (the President) had stated the conclusions to which his cases pointed, but the cases were too few to settle finally the import of the amount of paraglobulin.—Drs. GILES and WATT BLACK also spoke.

A paper by Dr. GOW, entitled "A Note on Vaginal Secretion," was next read, and he summed up as follows. The secretion is whitish, opaque, and resembles in appearance thick starch mucilage. The opacity is due to the presence in it of numerous flat nucleolated cells. The fluid is albuminous in nature, and there is no evidence of the presence of mucin. The reaction is acid, but the fluid when secreted is alkaline; the acidity depends on decomposition.—The PRESIDENT thanked Dr. Gow for his interesting contribution to physiological knowledge, and expressed his admiration both of the trouble Dr. Gow had taken to get a correct result and of his ingenuity in devising experimental methods of solving the problem he had approached.—Dr. LEWERS said he had noted that after extirpation of the uterus the vagina was not less moist than normal.—Dr. HORROCKS had always thought the vagina secreted, but he considered it had yet to be proved that the secretion was alkaline at first.—Dr. GOW, in a brief reply, attributed the acidity of the secretion to the presence of bacteria.

OTHER METROPOLITAN MEDICAL SOCIETIES.

HARVEIAN SOCIETY OF LONDON.—The second and third Harveian Lectures were delivered by Professor CORFIELD on Dec. 14th and 21st, 1893. In continuing his account of the diseases which had in his experience been attributed to

defective house sanitation Professor Corfield mentioned scarlet fever, of which he said that, although he had not infrequently been called in to inspect houses on account of cases of this disease, he had no reason to suppose that it was connected with bad sanitary arrangements, although, no doubt, the presence of foul air in houses tended to retard the recovery from this as well as from other diseases. He next gave a number of instances in which blood poisoning had been referred by the medical attendants to defective sanitary arrangements, and notably one in which the owner of the house had died after some months' illness and where several of the workmen employed in removing the old drains and substituting new ones had been taken ill with what was described as blood poisoning, some of them being obliged to leave the work in consequence of it. In this instance it was shown that the well was chiefly supplied by the drainage of the house and stables, and after water-tight drains had been substituted for the old defective ones, scarcely any water could be obtained from the well, and a new one had to be sunk at considerable expense. Puerperal fever was in his experience not infrequently caused by defective sanitary arrangements, and of this he gave several examples. He had not often been consulted after cases of pneumonia, but instanced among others an example of an outbreak of pneumonia in a large boys' school, where there were various defects admitting drain air into the building, and also a road ventilator from which bad smells frequently escaped opposite the main entrance to the school-house. He considered that the attention of the profession had not been sufficiently called to the fact that pneumonia is frequently caused by breathing foul air. With regard to diarrhœa the same observation might be made. People do not consider it of sufficient importance to investigate its causes. He instanced some remarkable cases in which outbreaks of diarrhœa in households were traced to escapes of foul air, and notably one—that of an infants' home, in which five children had died from diarrhœa caused by foul air escaping into the premises from the sewer through a defective disconnecting trap. He next gave a large number of instances in which enteric fever had been brought about by defective sanitary arrangements in houses, describing the defect in each case, and finishing his second lecture with an account of a case in which a number of horses in an important stable had been made ill by an escape of foul air from a cesspool through the untrapped drains of their stalls. In the third and last lecture he gave an account of the best method of inspecting the sanitary arrangements of a house and a description of the various kinds of sanitary appliances, this lecture being profusely illustrated with diagrams, among which were one of the watercloset invented by Sir John Harington in 1596, and another of the first watercloset patented in this country by Alexander Cumming in 1776, and also by a large number of sanitary appliances borrowed from the Parkes Museum. At the close of the course a hearty vote of thanks to the lecturer was passed, with the expression of a desire that the lectures might be published *in extenso*.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—At the meeting on Jan. 5th, the President, Dr. DONALD HOOD, occupying the chair, the following pathological specimens were shown:—Mr. R. W. LLOYD: A Stricture of the Sigmoid Flexure.—Dr. GOULD MAY: A Dog's Heart containing filariæ from Fiji. These worms give rise to no symptoms except cough, and do not appear to shorten life. They attain 5 in. in length and are not found in the human being.—Mr. MAITLAND THOMPSON showed a successful case of Craniotomy. The patient was a primipara aged twenty-six, only 4 ft. 10 in. in height. She had been in labour forty-eight hours; the os was partly dilated, and the membranes were ruptured. The pelvis was rachitic, the diagonal conjugate being 2¾ in. and the transverse 4 in. Forceps were of no avail; perforation was performed, and the skull bones were entirely removed; evisceration and dismemberment were necessary subsequently. The whole operation took four hours. The case did extremely well, the patient getting up on the twentieth day.—The PRESIDENT congratulated Mr. Thompson on his case.—Dr. LEWERS suggested the advisability of symphysiotomy in such cases.—Mr. LUNN and Dr. CLEMOW described cases of Craniotomy in their practices during the last few months.—Dr. LEWERS then related a case of Tubal Gestation successfully treated by abdominal section. The patient suffered for a short time with vaginal discharges and iliac pains; on April 1st she also had sickness and more pain; the vagina and cervix were bluish and the breasts full; there was fulness to the right side of the uterus, which was enlarged. On April 10th she had severe pain and vomiting. The uterus was examined and found to be empty, and abdominal section was performed on the 22nd. Blood and clot of various ages and a three months fœtus were lying amongst the intestines; the right tube was ruptured anteriorly and a second rupture was found posteriorly. The tube was removed; the toilet of the peritoneum was performed, iodine water being used. One week later the stitches were removed. The pulse rose to 140, and the temperature to 102° F., with swelling of the salivary glands. A few days later there was some discharge from the wound, which again healed rapidly. There was no distinct interval of amenorrhœa.—Four cases of Ectopic Gestation were related by Dr. SCHACHT, two under himself and two under Dr. Travers. The details of these cases were given.—Dr. GOULD MAY related a case of Ovarian Gestation he had seen in Vienna.

PROVINCIAL MEDICAL SOCIETIES.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 7th, 1893, Dr. EWART, President, in the chair.—Dr. GORDON DILL showed patients and read notes of Skin Cases treated with Thyroid Extract, reported in THE LANCET of Jan. 6th.—Dr. RICHARDSON showed a girl aged nineteen who was asymmetrically developed. There was a history of fright during pregnancy, but normal delivery. The difference in the two sides was noticed at birth. The patient is now chlorotic. The left eyebrow is the more arched. The head is generally held down to the left, although this is not necessary. The right mamma is notably the larger. The following are the measurements on the two sides: Right clavicle, 5⅝ in., left 5 in.; length of arms, 18½ in., 17½ in.; circumference of upper arms, 9⅛ in., 8½ in.; of forearms, 9½ in., 8¾ in.; of hands, 7½ in., 6¾ in.; semicircumference of chest, 15 in., 14 in.; length of legs, 33 in., 31 in.; girth of thighs, 17½ in., 15½ in.; circumference of feet, 8½ in., 8½ in.—Dr. NEWSHOLME showed specimens of Malignant Disease from a Cow. At about the middle of the small intestine was a growth, apparently starting from the submucous coat. The liver contained a similar growth, and the mediastinal glands were infiltrated. Microscopical sections showed a general resemblance to sarcoma, but with a larger proportion of connective tissue than is usual in such growths.—Dr. CHAFFEY showed a specimen of Pneumonic Sputum which contained an unusual Bacterium.—Dr. BOYCE read a paper, illustrated by sixty lantern slides, on Recent Researches into the Etiology of Cancer.

Reviews and Notices of Books.

A Text-book of Physiological Chemistry. By OLOF HAMMARSTEN, Professor of Physiology in the University of Upsala. Translated from the Second Swedish Edition by JOHN A. MANDEL of New York. London: Kegan Paul and Co. 1893.

OF the several text-books upon physiological chemistry that were available for the student, Lehrmann's, a translation of which was published by the Sydenham Society, is now quite out of date. Kühne (1868), von Gorup (1874), Besanez (1879), Hoffmann, and Hoppe-Seyler (1881), all of whom wrote excellent treatises, had not the good fortune to receive an English dress, at least in this country, and are also somewhat old. Mr. Sheridan Lea has supplied a very useful compendium, entitled "The Chemical Basis of the Animal Body," as an appendix to Professor Michael Foster's Physiology in 1892; and Dr. Arthur Gamgee has only just completed the second volume of his work. The choice of books on this subject to place in the hands of a student, therefore, becomes somewhat limited. We are glad to welcome a treatise from the hand of a master which may be relied upon to supply the most exact and recent information on many points that are or have been under discussion.

We naturally turn to the subject of the coagulation of the blood, with which Professor Hammarsten's name is so

intimately connected, but he writes with due caution and whilst giving the views of others does not commit himself to any theory of his own. He appears to support the generally accepted view of Schmidt that after withdrawal from the vessels the leucocytes break up, with formation of fibrin ferment and serum globulin, which last under the influence of the ferment unites with the fibrinogen previously present to form the fibrin. He remarks, however, that a fibrinogen solution free from serum globulin and a fibrin ferment solution also free from it may yield a typical fibrin. He thinks Dr. Halliburton's objections to Dr. Wooldridge's views, founded on experiments with peptone plasma and attributing great importance to lecithin, to be "weighty," and Professor Hammarsten is not disposed to accept Freund's suggestion that the reason for coagulation is to be found in a separation of calcium phosphate, whereby a part of the previously dissolved albuminous bodies becomes insoluble as fibrin. The several chapters treat of the Proteids; the Animal Cell; the Blood; Chyle, Lymph, Transudations and Exudations; the Liver; Digestion; Tissues of the Connective Substance, Muscle, Brain, and Nerve; Organs of Generation; Milk; the Skin and its Secretions; the Urine; and the Exchange of Material.

In every section numerous authorities are cited, but the precise reference is rarely given. This, we think, is a mistake. Important statements—such, for example, as the discovery of glycogen—may be associated with the name of a particular man, and the time when and the journal in which it was announced should be given; but it is hardly necessary to say that "by the investigations of Ludwig and his pupils, Röhrig, Zawilsky, von Mehring, and Schmidt-Mulheim, as well as by those of Heidenhain and his pupils," it has been proved that fat is driven through the chylous vessels and the thoracic duct to the blood, and so on. A footnote would have been sufficient, or a brief historical sketch might have preceded the section. In several places there are no less than twenty-eight such references in two pages. The section on Urine is very long and complete. The various constituents of the urine and the mode of testing for them are fully and instructively given, and there is a good final chapter on Metabolism. Mr. Mandel has performed his part as a translator well, the English version reading easily and the clerical errors being remarkably few in number.

A Guide to the Public Medical Services. By ALEXANDER S. FAULKNER, Surgeon-Major, Indian Medical Service. London: H. K. Lewis. 1893.

ACTING on the belief that a work of reference, containing information of appointments in the several Government Medical Services, is a desideratum, Surgeon-Major Faulkner undertook this compilation with the object of its being of practical utility as a guide to parents and guardians and to medical practitioners who intend to enter one or other of the public medical services. The author claims no originality for his work, which has been compiled principally from official sources. The extracts from the official publications are given with the permission of the Controller of Her Majesty's Stationery Office. The book gives information about the Medical Department of the Royal Navy, the Army Medical Staff, the West Coast of Africa Medical Service, Her Majesty's Indian Medical Service, the Colonial Medical Services, and the medical appointments at the General Post Office and those under the Factory and Prison Departments; it also treats of Government appointments in Ireland and of medical appointments under the Crown in Scotland. We think that facts and information not contained in the warrants and official publications might with great advantage have been looked up and added. For instance, it is disappointing to refer to the heading "Medical Appointments under the Local Government Board" and find that "the Board have not prescribed any special regulations with regard to appointments to medical inspectorships." Some information could surely have been gathered from the holders of appointments or from former applicants. Considering that the pamphlet is compiled by an officer of the Indian Medical Service it contains little valuable matter about that service. The civil appointments, which make the Indian the finest public medical service in the world, are scarcely mentioned. In the portion which treats of the Royal Navy no attention is drawn to the fact that, if an officer happens to be invalided home in consequence of ill-health contracted during service, he is placed on half-pay, and that during his illness and convalescence, until reported by a medical board as "fit for duty," he is mortified by seeing his juniors pass over his head and his chance of ever being promoted to the administrative ranks proportionally lessened. We think that a work of this nature, to be of real value, should be the output of many pens, each writer giving his personal experiences.

An Illustrated Encyclopædic Medical Dictionary. Edited by FRANK P. FOSTER, M.D., Editor of the *New York Medical Journal* and Librarian of the New York Hospital. London: Sampson Low, Marston, and Co. New York: D. Appleton and Co.

WE have received the first three volumes of this magnificent Dictionary, which bring the work up to MIN, and from this we may roughly conclude that there is about the same amount of material to follow. The preface of the general editor, who also takes charge of the departments of embryology, obstetrics, and gynæcology, contains a very fair exposition of the lines upon which the work has been done. Twelve well-known authorities were entrusted with the charge of twelve different departments, under instructions to draw their definitions from systematic courses of standard reading; consultation of other dictionaries was to be only a final resort, a precaution against the transmission of ancient errors which cannot be too highly commended. A comprehensible system of abbreviations has been adopted, and the method in which the ordinary dictionary dilemmas of compound words and composite expressions have been met, if not very simple, is quite consistent. Only those who have tried to invent such a method for themselves can appreciate the difficulties that have to be surmounted. Every bibliographer and librarian knows that the perfect catalogue—the list under which every kind of title shall always drop "pat" into its exact place—is an impossibility, and the lexicographer is in the same plight. As an illustration of Dr. Foster's method let us take the case of the metals used in medicine. Iron sulphate will be found under the head of *iron* (with a cross-reference from ferri sulphas), because iron sulphate is a natural product; but the tincture of perchloride of iron, a manufactured product, will be found under *ferrum*, as tinctura ferri perchloridi. Again, while gold mono-chloride will be found under *gold*, the aurum potabile of Helvetius (as a sort of tincture of gold obtained by laboratory manipulations) falls under *aurum*. This method of classification may be a little elaborate, but it is quite intelligible, and being accompanied by a liberal supply of cross-references, helps to prevent confusion. Gold-beaters' skin, however, will be found under *skin*, when the Dictionary is so far complete, in deference to another rule—one of Dr. Foster's rules for the treatment of those bugbears of all dictionary-makers, the compound nouns. Compound nouns consisting of substantive and qualifying adjective or epithet are, contrary to the usual rule, placed in this dictionary under the noun, so that, for example, Norwegian fir and trigger-finger will be found respectively under *fir* and *finger*; but where the epithet is very clearly the essential part of the expression, as it is in chemical nomenclature generally, the rule is reversed, so that nitric acid falls under *nitric* and acetic aldehyde under *acetic*; but

even this rule is not invariable, for absolute alcohol will be found under *alcohol*, the qualifying epithet being considered colloquial and unimportant and the noun the essential thing. We may seem to have given an excess of space to the mere consideration of the way in which this Dictionary has been arranged, but this is not so. More than all other books of reference, a dictionary must be properly arranged to be of the slightest use, and by its arrangement it will certainly stand or fall. It seems to us that, although there can be no perfect system, Dr. Foster has done his very best and has got as near perfection as possible, and his numerous cross-references make it certain that in the end whatever we look for will be found.

We have tested the contents of the Dictionary in the only practical manner by which such a work can be tested, by selecting words, sometimes at random and sometimes for special reasons, from other dictionaries, books of reference, and general and special medical treatises in three languages, and then referring to Dr. Foster's dictionary for information on those words. As a result we have pleasure in saying that we have been unable to find any mistakes, and the only omissions have been some of those triple-decked words which the German *savant* handles so freely, but which all the rest of the world treat under their component parts. We must, however, take some exception to the amount of space allotted to different subjects. For example, a short half of a column on the chemical action of *chloroform*, supplemented by two lines under the heading *anæsthesia (surgical)*, is not adequate treatment of this important subject in a dictionary of this colossal size; and the inadequacy becomes more patent when we find, *inter alia*, two columns and three-quarters devoted to *colocynth* and one and a half to *impetigo*. But these are small faults, and Dr. Foster's task has been a very heavy one, and has so far been carried out on the whole in a style that merits the warmest congratulation. His publishers have helped him by issuing the volumes in a sumptuous manner, with copious illustrations of really high merit, those in exemplification or adornment of the osteological and botanical subjects calling for particular mention.

Darwinianism: Workmen and Work. By JAMES HUTCHISON STIRLING, F.R.C.S. and LL.D. Edin. Edinburgh: T. and T. Clark. 1894. Pp. 358.

THE first part of this work gives an account of the predecessors of Darwin and a description of Darwin himself; whilst the second part furnishes an account of the work done by Darwin, the mode in which the "Origin of Species" was ushered into the world, the advantage it possessed in being in part supported by such men as Lyell, Hooker, Asa Gray, Wallace, and above all by Huxley, and also a criticism upon it. The author is entirely opposed to the hypothesis of Darwin. The style in which he writes is very disjointed; there are parentheses and dashes and elisions enough to make the hair of Cobbett stand on end, and in some places it is obscure, but on the whole it constitutes a pungent criticism of Darwin's views. Dr. Stirling has taken infinite pains to arrange parallel passages in Darwin's works and arrays them against him in rather formidable fashion. As a boy Darwin himself tells us that he painted polyanthuses to cause people to believe that they were new kinds and resulted from watering them with coloured fluids, and also that he gathered and hid fruit to make believe they had been stolen and concealed, and all for the purpose of creating excitement. This failing, Dr. Stirling thinks, persisted in adult life. He contends that much of Darwin's work was of the nature of a compilation, in which the correctness of the statements was not always duly ascertained, and that he won over the great naturalists who in part supported his views by judicious commendation of their work and implied coincidence of view. Dr. Stirling calls in question the struggle for existence, asks how it is that the carnivora have not altogether abolished their prey, refers to the harmony in which many social animals live and the absence in them of any fear of enemies, and gives an amusing account of the gradual development by evolution of a woodpecker in illustration of Darwin's method of arguing.

Speaking of the teleological aspect of Darwin's work, Dr. Stirling considers that it was the one special pride of Darwin to think that he had brought the organic world to the same level as the inorganic world, and that "purpose"—at least, intelligent "purpose"—might be altogether ignored. He also thinks that some of those who were supposed to be adherents of the Darwinian theory of evolution by natural selection—such as Kingsley, Asa Gray, and Lyell—were by no means at one with him on this point, and more or less completely held to the idea of "design by an intelligent Creator." A chapter is devoted to a criticism of Natural Selection. Darwin, visiting the South American pampas, found, and was strongly impressed by, the circumstance that they swarm with gigantic fossil remains of land animals—for example, of the glyptodon—where now only the little congenerous armadillo is found. Dr. Stirling asks, "Is this the survival of the fittest?" and quotes Pictet, who says, "The theory of Darwin agrees ill with the history of the types of clearly defined, sharply cut forms, which seem to have existed only for a limited period," such as the flying reptiles, the ichthyosauri &c. Dr. Stirling makes much, as he has a right to do, of Darwin's admission that the first progenitor or progenitors of living things must have been created or at least must have "appeared," but if these were created why hesitate to admit that the others might have been so too. He contends that Darwin was in a general way struck by some curious fact or phenomenon, that he proceeded to raise a hypothesis upon it, then piled up a miscellaneous collection of facts to support his hypothesis, and finally thought he had proved it. As a serious refutation of what are broadly known as the Darwinian doctrines this book has no real status; but it is an admitted fact that the theory of natural selection will not in all its details quite defy criticism. Temperate criticism will not only do no harm to the immense masses of fact proved upon Darwinian hypothesis, but it should stimulate evolutionists to eliminate all possible sources of error and confusion from their work.

New Inventions.

CELLULOID FACE-PIECES AND MASKS FOR THE ADMINISTRATION OF ANÆSTHETICS.

THE value of celluloid in the construction of various surgical appliances is gradually being recognised. For the last two or three years I have had in constant use a set of face-pieces and masks made of this substance. They have therefore stood the test of time, and, moreover, have quite realised my expectations. The face-piece (Fig. 1) is made of the thinnest possible material, so that it is not only transparent, but can also be bent to adapt itself to the face; its shape is that represented in the figure. The face-end is fitted with a removable rubber pad inflated to exclude air, and it is mostly used in the administration of nitrous oxide gas. The mask (Fig. 2) is made of quite stout material, and its shape is that which when the material is of leather is, I think, known as Rendle's mask. It is freely perforated at one end, and the other end fits lightly over the nose and mouth. A loosely fitting flannel bag serves to protect the face and to hold in position the honeycomb sponge upon which the anæsthetic is poured. This is the mask that I usually employ for the administration

of the A.C.E. mixture or to maintain ether anæsthesia. The advantages claimed for these face-pieces and masks over the ordinary leather ones are: 1. They are more cleanly. Provided that warm water is not used, they can be frequently washed and scrubbed. The material itself being absolutely non-absorbent, they can easily be kept free

FIG. 1.

from unpleasant odour. With leather this is almost impossible, for, even if covered with rubber, frequent washing quickly ruins them, and at best they are seldom free from smell. 2. The face-piece being transparent, one can obtain a fair view of the mouth even during the induction of anæsthesia, and can see, for instance, whether the mouth-prop maintains its position. The masks, being made of thicker material and having a flannel bag, are of course not transparent. It is, however, but seldom that the mouth is propped open when this particular form of inhaler is likely to be used. 3. They are more sightly. This, of course, is a minor advantage, but it will not be the less appreciated either by the patients or by those who administer anæsthetics at all frequently. 4. They are lighter. In respect to the face-pieces the advantage is about an ounce, and in respect to the masks nearly four ounces, in favour of the celluloid. As already mentioned, they should not be washed in warm water, or they will lose their shape, nor should they, for the same reason, be dried near a fire. In using the masks, too, the sponge should not be over-saturated, or the flannel bag will stick to the mask; but these are points against which no careful anæsthetist needs to be warned. These face-pieces and masks are made in several sizes and are kept in stock by Messrs. Down Bros., to whom my best thanks are due for the care and trouble they have taken in carrying out my suggestions in the matter.

FIG. 2.

J. FREDK. W. SILK,
Anæsthetist and Instructor in Anæsthetics at King's College Hospital, &c.
Weymouth-street, Portland-place, W., Dec. 19th, 1893.

AMMONIUM CHLORIDE INHALER.

We have received from Messrs. Hockin, Wilson, and Co. of New-inn-yard a sample of their portable chloride of ammonium inhalers. These commend themselves chiefly by their simplicity and reasonable price. They are constructed primarily on the ordinary model—that is, a flask having a doubly-pierced cork contains the reagents for generating the gas. The acid being placed within the bottle, a few drops of ammonia are poured upon a sponge fixed in a funnel in one of the apertures, and the liberated neutral gas is conducted from the other aperture along a flexible tube, which is also guarded at the outlet by a sponge, into the mouth. This inhaler is a cleanly and convenient little apparatus, which, evidently, might often be of service in the sick-room.

Analytical Records
FROM
THE LANCET LABORATORY.

GRAND VIN BRUT: CHAMPAGNE SANS SUCRE, AND COCA TONIC CHAMPAGNE (SANS SUCRE), LAURENT-PERRIER, REIMS.

(HERTZ AND COLLINGWOOD, 4, SUSSEX-PLACE, LEADENHALL-STREET, E.C.)

IN spite of the difficulty which must attend the production of a satisfactory champagne quite free from sugar, so that the qualities for which the normal product is so esteemed may not be impaired, this specimen, while exhibiting all the choice qualities of a high-class wine, was found to show no departure from the usual composition of this well-known brand, save, of course, in one respect—viz., its freedom from sugar. Its composition, compared with ordinary champagne, is therefore of interest, and is as follows: alcohol, by weight 10·23 per cent., by volume 12·68 per cent., equal to proof spirit, 22·22 per cent.; extractives, 2·09 per cent.; acid equal to tartaric acid, 1·05 per cent. Thus it is free from excessive extractive substances, and, according to other tests, contains barely a traceable quantity of objectionable saccharine matters, both of which have hitherto rendered champagne one of the wines forbidden in the dietary of the diabetic. Champagne, inasmuch as it contains a large proportion of sugar, varying in amount from 4 to 12 per cent., is, of course, ranked amongst sweet wines, and is to be avoided partly on that account by diabetic patients. In ordinary champagne this sugar is chiefly derived from added liqueur, but in the so-called Brut wines no liqueur is supposed to be used, and the sugar then present is a residue of the original sugar of the grape which has escaped conversion into carbonic acid gas and alcohol in the fermentation process. Apart from its freedom from sugar, this wine contains also a wholesome and palatable proportion of the acid constituents of the grape, a feature of some importance also to the diabetic patient, since it has been observed that light acid wines exercise a powerful retarding influence on salivary digestion, impeding the digestion of starchy materials and the consequent production of sugar. It is a brilliant, sparkling wine, possessing all the agreeable qualities of a high-class champagne, and yet one which may be taken, according to our analytical observations, in approved quantity where strong alcoholic and saccharine drinks are prohibited. Equally satisfactory is the coca tonic champagne from the same growers, which on analysis exhibits a similar composition to the above (sans sucre) except for the addition of a desirable proportion of coca leaf principles.

HOP GIN.

(DISTILLED BY J. S. SMITH, DRUCE, AND CO., LIMITED, PHŒNIX DISTILLERY, LONDON.)

Careful examination as to the taste and colour of this novel product shows at once that it is not ordinary gin. It is a bright amber-coloured spirit, possessing a delicacy of bitter flavour characteristic of the hop. The bitter principles may be more readily recognised by extracting the diluted gin with ether. The ether on evaporation then yields a small residue, which has a marked but fleeting bitter taste. It is not generally known that the bitter principle of the hop, unlike many other bitters, gentian for example, is a glucoside,

so that in the saliva it is gradually converted into sugar (glucose); in other words, while most bitters impart a permanent and persistent flavour in the mouth, the bitter taste of hops is fugitive, because under the action of the enzyme of the saliva it is soon converted into sugar. The above preparation is a pure and agreeable spirit and of good alcoholic strength. It yields on analysis the following data: absolute alcohol, by weight 29·87 per cent., by volume 36·04 per cent.; proof spirit, 63·17 per cent.; extractives with hop principles, 2·31 per cent.; mineral matter 0·015 per cent. It is evident that there are interesting features in the preparation, the object of which is doubtless to supply a spirit possessing the stomachic and tonic properties of the hop.

DIABETIC BISCUITS.

(H. VAN ABBOTT AND SONS, 6, DUKE-STREET-MANSIONS, GROSVENOR-SQUARE, W.)

Messrs. Van Abbott have added two further important preparations to their well-known and valued list of foods for patients suffering from diabetes. They consist of two varieties of biscuit, one composed of gluten flour and a small proportion of powdered ginger, and the other of soya flour flavoured with caraway seeds. Both specimens contain a minimum amount of starchy matter, whilst saccharin has been substituted for sugar. The biscuits are very palatable, and, as regards taste and flavour, give hardly any suggestion of the purpose for which they are specially made. The endeavours of manufacturers to modify the preparation of food, so as to meet the requirements and tastes of those restricted to a certain diet, as, for instance, diabetic patients, cannot fail to gain appreciation and approval.

PURE SOLUBLE COCOA.—BONBONS ASSORTIS.

(JOHN ROTHWELL, COCOA WORKS, WIGAN.)

A point worthy of notice in regard to the composition of this cocoa is the remarkably small amount of fat it contains, an amount, in fact, lower than any specimen we have previously examined. The mean result of two determinations was 12 per cent., while the ash (somewhat high, probably on account of the reduction in fat) amounted to 6·6 per cent. There was no evidence of sophistication; it is a good soluble cocoa and of pleasing, rich flavour. The various bonbons, which we have examined especially for objectionable colouring materials, belong evidently to the class of confections correctly ranked as superior. Beyond the merest traces of aniline colouring, which is now very generally employed, we found nothing to which exception could be taken on the grounds just indicated.

PURE TURKISH TOBACCO AND CIGARETTES.

(C. B. VAN LENNEP, 42, LONGRIDGE ROAD, EARL'S COURT, S.W.)

The leaf from which these cigarettes are made is claimed to be a Turkish tobacco of the highest quality, and a growth which has hitherto not been procurable in a pure state in this country, although used to blend with other kinds to impart character and flavour. On inspection the leaf proved to be a choice variety of Dubec, and according to microscopical examination is identical with that present in the cigarettes. The cigarettes yield a smoke possessing the well-known aroma peculiar to the Dubec leaf; but while it is particularly fragrant it is somewhat powerful also. The normal mineral constituent of genuine tobacco—namely, nitrate of potassium—was extracted from the leaf in good quantity.

VARIOUS DISINFECTANT AND ANTISEPTIC PREPARATIONS.

(NOBES AND CO., WILLESDEN JUNCTION.)

The disinfectant and antiseptic preparations made by the above firm take three forms—viz., (1) eucalyptus fluid, (2) antiseptic fluid, and (3) zymotic eucalyptus powder. On examination the eucalyptus fluid proved to be a solution of bichromate of potash, containing also globules of eucalyptus oil. This is the first time we have found chromium compounds in preparations of this class. We are unable to speak of its power as a disinfectant, deodorant, or antiseptic; but, like permanganate, it is a powerful oxidising agent. But among the disadvantages that must be reckoned with in its application as a disinfectant, &c., may be mentioned its poisonous nature and its power of staining articles with which it may be brought into contact. On the other hand, the antiseptic fluid which we have called No. 2 is harmless, and consists simply of a strong solution of an alkaline permanganate. One volume of the solution was found to be equivalent to three volumes of oxygen available for disinfection and antiseptic purposes. No. 3 is a powder (chiefly carbonate of lime) possessing a fragrant smell of eucalyptus. It evidently contains an excellent proportion of this well-known and much-used antiseptic, and it is free from the objections which are often urged against similar preparations containing a different but less agreeable agent.

NORWICH EXTRACT OF MALT.

(JOHN ROBINSON AND CO., NORWICH.)

It is well known that the preparation of an active malt extract requires some care, since diastase is killed at a temperature above 60° C. The above preparation possesses high diastasic power in spite of the exceptional proportion of cod-liver oil it contains. Under the influence of a solution of the extract starch jelly was rapidly liquefied and finally converted into sugar. The microscope showed perfect uniformity in the emulsion—a peculiar condition which is instantly disturbed on the addition of water, when myriads of tiny fat globules separate. The flavour is agreeably aromatic and the colour attractive.

PILSENER LAGER BEER.

(O. BRUSTER AND CO., 143A, HOLBORN, E.C.)

In THE LANCET of Sept. 16th, 1893, we had occasion to comment upon the use of salicylic acid as a preservative which we had found in small quantity in this well-known brand of Pilsener beer. We are glad to have the assurance of the above firm that this treatment is by no means necessary, and proof of this is afforded in the fact that in recent samples examined, although in a condition as excellent as before, no objectionable preservative could be traced. As already indicated, the beer is a superior and well-finished product, of delicate flavour, belonging to the class of light German beers which, as is well known, are more suitable for many purposes than the beers we are accustomed to in England.

TANOCEA OR TEA-TONING TABLETS.

(TANOCEA TABLET COMPANY, BLETCHLEY STATION.)

It is well known that tannin forms with gelatin an insoluble compound which may be regarded as identical with leather. When, therefore, hide raspings are digested in a solution containing tannin the surfaces of the raspings are found to be hardened after a time. This has led to the idea of reducing the tannin in tea by placing in the decoction a pellet of gelatin. The tanocea tablet intended for this purpose is composed, according to our examination, of gelatin and carbonate of soda. We fear the time required for the appropriation of the tannin by the gelatin would be too long to render such a simple and otherwise ingenious method of any use. Gelatin in a hard, dried form takes considerable time to become softened, to begin with, and the infusion would get cold long before any appreciable proportion of the tannin was removed. Trials were made in the Laboratory, but no perceptible difference in the character of the infusion was noticed except a soft alkaline taste due to the carbonate of soda in the tablet, the addition of which to tea is unnecessary and to many persons objectionable.

THE LANCET.

LONDON: SATURDAY, JANUARY 13, 1894.

THE very characteristic address to students of the London Hospital on the Treatment of Fibroid Lung Disease (one of the series of Instructions in Clinical Medicine given at that hospital by the late Sir ANDREW CLARK), which was published in the last issue of THE LANCET, suggests a brief consideration of the principles upon which he treated disease and of those qualities which made him so widely consulted a physician. He was rather fond of saying that medicine is the most unprincipled of arts. Be this as it may, there are some great general principles underlying Sir ANDREW CLARK'S treatment of disease which had much to do both with his own success and that of his treatment, and which are stated with his usual felicity and clearness in the address. His great fundamental idea of treatment was that it must have regard to the laws of health. "The first observation I make to you is a curious but an important one: it is that the laws of health are not suspended because a person is sick." He believed that most cases of disease had their origin in some violation of the laws of health, and of these laws he was a constant student; he reasoned with his patients as if they studied these laws, too, or were capable of so doing. It was almost a daily practice with him to read a portion of some work on physiology, as it was a daily prescription to each patient that he was to obey the laws of "physiological righteousness." It would be difficult to over-estimate the effect his advice and his authority had in impressing well-to-do people with the conviction that the luxuries they enjoyed were a source of risk and often of disease to them. Few patients left his consulting-room without receiving carefully written instructions regarding diet, and though these generally allowed three liberal meals a day they were not immoderate and unlimited ones. He tells his students that if it were possible to divide patients suffering from acute diseases into two classes, the first class consisting of people in circumstance just sufficiently comfortable to live and the other class of the rich and the great, it would be found that the mortality amongst the latter class greatly exceeded that of the poor and those just sufficiently well-to-do. His teaching about alcohol, well defined in the address under notice, was uniform and sound. His remarks had immediate application to cases of fibroid phthisis, but they were very much the same as he used in other cases. If the patient is equally well without alcohol it is much better that he should not have it. He was too good a physician not to see that some cases were greatly benefited by small quantities of alcohol; but these must be given at the right time. On this point he is very explicit, and represents all sound medical teaching. The right time he defines to be certainly not between meals or on an empty stomach. "I entreat you," he said to his hearers, "to avoid either giving or assenting to the giving of alcohol in any form under such circumstances. Give the alcohol at dinner or supper, and at no other time." It will not be the least service Sir ANDREW CLARK rendered to his generation that with all his authority he insisted on temperance and did his best to remove that blind belief that the weakness of disease is to be overcome by indiscriminate eating and drinking. He impressed on his patients and on the public audiences that he addressed that attention to such things has far more to do with health than great things: "It is not so much the big things of life, it is the little things that make and unmake health."

Another very striking feature of Sir ANDREW CLARK'S therapeutics was his estimate of the importance of work. In the last generation one of our great surgeons distinguished himself by a work on the surgical advantages of rest; but in this we have had a physician who has told all his patients that to the measure of their ability they are to work. Like another prophet of this age, he has enjoined and eulogised work, not only as a duty and as a pleasure, but as a condition of health. Even patients with fibroid lungs are to do a little work. At the London Hospital the patients were told to go up and down stairs for the sake of expanding the contracted lungs, which came to be called the "stair treatment"; for even in the case of a delicate organ the fullest regulated discharge of all its functions is the cardinal condition of its highest life. Some of his friends thought that he himself did too much work, but he would never admit it, and he was fond of saying that he had never known anybody to be the worse for work. In this very address he describes how his contemporaries prognosticated his early death because he worked hard and ate little, and how thirty-eight years afterwards most of his contemporaries were dead and he himself was one of the few survivors. On the other hand, he admitted that worry is injurious. "Labour is life, but worry is killing," and he imposed on his patients, as a duty, that by an effort of will they should — as he said they could — cultivate quietness of mind. The fact is that he in his capacity of physician took into consideration the character of his patients, all their conditions and circumstances, and even their sins and temptations, and on these founded a large part of his advice, which enabled the patients as a rule to live longer and where this was not possible to die more easily. As he said nine years ago,[1] in a remarkable account of the case of a vivacious old gentleman of eighty-two years of age suffering from relapsing pneumonia who recovered after having had nine or ten rigors, "I first attended to the man and then to the malady." Every case was unique in his view and had to be treated on its own merits and according to special circumstances. This very case showed that he had his own favourite prescriptions, and that despite his strong teaching on the abuse of purgatives he did not despise the use of colocynth and blue pill in order to prepare the way for brandy and quinine, and poultices, and an alkaline saline, to be afterwards fortified by the addition of ammonia, and all to be subordinated to the natural conditions for promoting recovery. "The food was given in relays, not too liberally or too frequently"—avoiding a mistake often made with the best intentions, which loads and narcotises rather than helps the patient. He endeavoured to maintain the vigour of the circulation, to shut out noise and fussiness, and by light and

[1] THE LANCET, Dec. 20th, 1884.

fresh air to keep the organism in the best possible state for recovery. We have said little of Sir ANDREW CLARK'S use of drugs, but he used them freely and skilfully. We have the authority of Dr. LAUDER BRUNTON for saying that he was a master of therapeutics, that he kept himself abreast of the newest remedies, and that he used old ones with remarkable skill. His instructions on fibroid phthisis include several prescriptions, which he mentions in terms which show his confidence in them.

We should miss one great secret of Sir ANDREW CLARK'S power over his patients if we did not recognise two or three of his other great qualities—viz., the confidence and authority with which he spoke, which were based on the soundness of his general principles of treatment, and the cheerfulness with which he regarded even the graver classes of cases which came before him. Patients suffering from heart disease and lung disease went to him, and received, not prognostications of evil, but materials for hope and comfort. His paper on Valvular Disease, read at the Brighton meeting of the British Medical Association, showed not only how carefully he noted the individual cases which came before him, but what an eye he had for the hopeful side of disease. He had seen 684 patients suffering from valvular disease without symptoms or suffering, and who had come to him for other complaints—viz., indigestion (272), rheumatic conditions (57), gout (22), nervous complaints (44), eczema (17), and phthisis (4). Heart lesions in young subjects, he said, were considerably improved if development was not complete. He found in such patients fit subjects for his advice about physiological living and sent them away with the impression that if they obeyed his suggestions they would live little less happy or less long lives than other men. The physician is bound to regard disease in its most hopeful aspects; patients go to him, not that he "may cast the fashion of uncertain evils" and accidents, but for suggestions of hope and help.

WE announced last week that a course of practical psycho-physiology would be conducted during the Easter term at University College, London, and mentioned that although psychology, both in America and on the Continent, had been made the subject of some precise and experimental treatment, such a course formed a new departure in English scientific education. The Leipsic school, with ERNST HEINRICH WEBER as its mouthpiece, will always be associated with psycho-physical methods of research, and there can be no doubt that his practical inquiries into tactile and muscular sensation form the earliest genuine work in this direction. The law (the WEBER-FECHNER law) which proposed to formulate the due relation between stimulus and resulting sensation was directly suggested by WEBER'S experiments, though it was afterwards greatly generalised by FECHNER, and it remains the best-known piece of practical work directly dealing with the debatable province lying between the acknowledged territories of the physiologist and the psychologist. But these experiments date from sixty years ago. And since that time physiology has advanced by such enormous strides that to those who take no heed of beginnings the science may almost seem to have been invented during the six decades; while psychology, appearing now as the statistical investigation of the alienist, now as the illuminating lecture of the philosopher, now as the speculative anatomy of the physician, and now as the observant guesswork of the novelist, cannot be said to have been neglected. All this constitutes a double invasion of the intermediate ground. And although it has not as yet resulted in the discovery of new laws undeniably appertaining to the region between, rather than to the one science or the other, yet it must conduce to such result, if laws there be which can be made patent to our present understanding.

Professor BURDON SANDERSON in his learned and suggestive presidential address on Biology delivered before the British Association at Birmingham last year[1] pointed out that "between sensation and the beginning of action there is an intervening region, which the physiologist has hitherto willingly resigned to psychology, feeling his incompetence to use the only weapon by which it can be explored—that of introspection." It will be remembered that Professor BURDON SANDERSON then assigned the greater part of the debatable ground to physiology by regarding mind (using the word as a collective term for all mental evolutions and emotions—that is, for the whole of subjective life) as a specific energy of the vital organism, the processes being the special actions normally performed by certain cerebral cells under certain stimuli, and comparable to other specific energies. Three weeks later Dr. LIONEL BEALE in his introductory lecture at King's College on the Nature of Life found himself standing on the edge of this same territory, and his words showed that, so far from believing that there was a great future for the work of the physiologist in a psychical direction, he considered the problem of the source of life to be beyond the possibilities of human investigation. "We have not advanced," he said, "one step nearer the proof that life is 'energy'—'immanent,' 'specific,' or 'cosmic'—or due to the properties of matter, or one with cosmic processes, or due to chemical actions, or to machinery of molecular or other character, or to the influence of external conditions, or to environment or tendencies."[2]

By placing these almost simultaneous statements of opinion from the mouths of two great scientific authorities in juxtaposition we are able to see very clearly that there is a line beyond which, while all find it very hard to go, some believe it is almost wrong to try to go. It would have been easy to find more controversial expressions uttered from either camp, but it has been purposely that we have selected the words of men whose sincerity, moderation, and sterling work no one can gainsay, to illustrate the two views upon what is colloquially termed "materialism." There are some whose delight in the fireworks and acrimony of debate detracts from the value of their opinions, but when reasonable men, as well as learned, can see so very distinctly two sides of a question, the chances are that in the present state of our knowledge (and theirs) two sides exist. But what we desire to point out is that such differences of opinion, even upon the fundamental topics of the origin and nature of life, so far from

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[1] THE LANCET, Sept. 16th, 1893.
[2] THE LANCET, Oct. 7th, 1893.

interfering with future work will be of practical benefit to it. The element of party is introduced, and will prove—as it always has proved when its operations have been allowed only moderate scope—a guarantee against loose and facile methods and over-quick deductions. It cannot really matter to the world at large what the private and prophetic beliefs of the investigator may be as to the general trend of his work, provided that he continues to honestly investigate and is protected by equally honest criticism from jumping to hasty conclusions. With the enormously increased facilities for laboratory work on the one hand, and the vast stores of lucid writing on the other that the past twenty years have placed at the investigator's service, it seems to us that systematic inquiry into borderland problems may very well result in valuable discovery—and that without either upsetting the faith of our forefathers or convicting the sceptical of a pernicious atheism.

IT is still only recently that the brilliant researches of Mr. VICTOR HORSLEY on the pathology of myxœdema conveyed to Dr. GEORGE MURRAY the suggestion that cases of this and kindred diseases might be successfully treated by the administration, in some form, of the organ, obtained from lower animals, which was supposed to be at fault. Since Dr. MURRAY made his results known they have been confirmed by numerous observers, and now it may, without fear of exaggeration, be asserted that the successful treatment of the conditions alluded to marks one of the greatest therapeutic advances of the century. It was only natural that the method, as applied to other in no way similar diseases, should be carried to an extreme, and even to an absurdity. Without any reference to this great discovery, Dr. BROWN-SÉQUARD had already introduced a fluid, widely known by his name, which was prepared from the reproductive glands of certain animals and was supposed to have the virtue of endowing tottering senility with the energy and vigour of manhood. This fluid has been administered in every conceivable way, but chiefly hypodermically; it has not been found, however, in the hands of others, to produce the wonderful results which were claimed for it by its inventor. And we may say, in passing, that it is a matter for regret that some of those who have had opportunities of observing its utter uselessness for the purposes for which it was introduced, as well as for those which were subsequently claimed for it, should not have recorded in an authoritative manner the evidence which they have obtained of its inefficiency. Although the introduction of this substance cannot be ascribed to any imitation of thyroid feeding—indeed, as we have said, Dr. BROWN-SÉQUARD was first in the field—it is significant as a sign of the active search for new remedies which has of late years been so vigorously, and to a certain extent so successfully, prosecuted; but such a step as the introduction of thyroid administration initiated, was, in the nature of things, bound to be followed by the application of what, at least, were supposed to be analogous principles in relation to the treatment of other diseases.

Among these diseases diabetes may be mentioned. It is now recognised that, whatever the ultimate pathology of this condition may be, in certain cases there is undoubtedly a widespread change in the pancreas. According to some this is merely concomitant, according to others causative; but it was at least sufficient to suggest the employment of this gland in the treatment of the condition. If diabetes were certainly dependent upon any condition of the pancreas which abolishes the pancreatic functions it was not unreasonable to suppose that the administration of a similar substance, or of one as nearly similar as the lower animals can furnish, might be followed by some good effect upon the disease. We are not aware that such has been the case, although the upholders of the view that diabetes is a pancreatic disease would scarcely be prepared to admit that such want of success is any proof that their theory is incorrect.

The condition of pseudo-hypertrophic paralysis, which in many instances seems to become first manifest at a time at which the thymus gland is undergoing atrophy, was another which appealed to the imagination of some therapeutists, being one in which there was a prospect of improvement by the administration of the gland taken from animals corresponding to the organ supposed to be at fault. In this case also hopes have so far not been realised, although it will be evident on consideration that they may have been in the first instance rashly, if not unreasonably, entertained, and perhaps also too rashly abandoned. The condition of the thymus is notoriously a variable one. In some children it is exceedingly small, while in others of the same age it is much larger, so that before grounding any hopes of improvement in certain states from its administration it would be at least desirable to have its condition carefully ascertained not only in children suffering from the disease under consideration, but also in children not so affected. If its general absence, or even diminution, in this form of paralysis were an ascertained fact, there would be at least something to go upon in advocating its employment, and the hitherto negative results obtained might be due to some defect in the mode of administration. As is well known, it was at first supposed to be necessary to administer thyroid extract hypodermically, and although in this case it was shown—first of all, we believe, by Dr. HECTOR MACKENZIE—to be unnecessary, it does not follow that it may not be necessary in the case of other glandular extracts—so that it will be seen that much careful observation in at least two directions is still necessary before this idea can be altogether relegated to oblivion.

But with regard to the proposed administration of extracts from other organs, or of the actual organs themselves, we confess that we do not in many cases see much justification even for entertaining a hope that it will be successful. So-called "cerebrin" and "myelin" have been administered in brain and spinal-cord diseases respectively, but neither in the pathology of the conditions nor in the composition of the remedies is there any hint of even possible benefit, and no such benefit has been obtained. The same may be said of the use of kidneys in Bright's disease and of liver in liver diseases. Such vagaries and irrationalities are, we fear, the inevitable accompaniments of any great step in any science; more particularly is any great advance in therapeutic science likely to be accompanied by much that is irrelevant and useless.

Annotations.

"Ne quid nimis."

THE APPOINTMENT TO THE CHAIR OF MIDWIFERY IN GLASGOW.

THE long delayed act is accomplished at last. Sir George Trevelyan has filled the vacant chair of Midwifery in the University of Glasgow by appointing Dr. Murdoch Cameron. It is no disparagement to Dr. Cameron to say that, however good his claims to this post were, those of Dr. Berry Hart were apparently considered in the medical world to be stronger. Those who defended Sir George Trevelyan acknowledge this, thereby apparently allowing that motives other than that of finding the candidate most acceptable to the general body of the profession dictated the choice. If this has been so, it is no light matter. In itself, and in its great human aspects, in its relation to the general problems of medicine and surgery, and in respect of the manner in which the subject can be presented to students, no medical appointment is of more importance than that filled by a professor of midwifery. Dr. Murdoch Cameron will not construe our criticisms in any personal sense. He at least is not to be blamed in this transaction. Our criticisms seem certainly to have served to expedite the appointment which has fallen to his lot, and we have only to wish him high success in the discharge of its duties.

PATENT AND QUACK MEDICINES.

THE Edinburgh Health Society have issued as the seventh in a series of health lectures for popular use some candid remarks by Dr. Joseph Tillie upon patent and quack medicines. We are aware, as certainly is Dr. Tillie, that unfortunately no amount of writing against quackery will abolish the evil; the very effort to do so is comparable to (and has been compared to) an attempt to wipe up the sea with a hand-mop; but such a lecture as Dr. Tillie's may well have some practical outcome, for it is arranged on intelligible lines, and, without declamation or learned protest or any appearance of partisan heat, quietly demonstrates the absurdity of the pretensions put forward for their wares by the vendors of quack remedies. The reasons urged by the vendors in support of their claims to public attention may be summarised roughly thus:—1. The nostrum is a specific for all sorts of diseases—difficulties of diagnosis being thus abolished, for no matter what the disorder the emedy is equally efficacious. 2. It is under Government, or even quasi-royal protection, this being proved by the Government stamp that is affixed to each bottle or box bearing the Royal arms. 3. Its curative action will be certain, an important detail which is vouched for by much thrilling and grateful correspondence from quondam sufferers. 4. Therefore diseases which have baffled many medical men will yield to its exhibition, exorbitant fees being thus avoided. Simplicity, economy, patriotism, and loyalty, surely among the most useful civic virtues, are, it will be seen, all appealed to. Special remedies make special demands upon the attention of particular classes of the community and occasionally an advertisement will be particularly wicked or disgusting; but we have only intended to give a generalisation of the more usually vaunted merits of proprietary remedies, so that we may illustrate Dr. Tillie's simple method of dealing with them. All the regulation boasts save the second are proved to be idle by a careful chemical or microscopical examination of the different compounds. These are then found to consist of perfectly well-known ingredients, well known not to possess the wonderful powers ascribed to them by the proprietors of the various elixirs in which they occur. Aloes is the most constant constituent and it is given in all sorts of doses, from the entirely inefficacious up to a point where it must certainly prove an over-active agent in many conditions. But all the other ingredients are as perfectly familiar to every medical man as aloes is, and their limitations equally recognised. Thus the sweepingly benignant influence, the certain cure, and the suggestion that the sufferer in taking the remedy is swallowing the mystical product of a more subtle chemistry or of a more accurate pharmacy than the medical practitioner has time or wit to employ, all these are instantly refuted by the analyses of the medicine. With regard to the Government stamp, Dr. Tillie points out that its presence simply implies the payment of a tax—a tax on the credulity of our weaker brethren that more than sixty years ago we suggested might well be removed [1]—and that the stamps are sold, exactly as postage stamps are sold, by officials who, so far from vouching for the contents of the packets to which they are affixed, know no more of those contents than a postman knows of the inside of a stamped letter. These things are very familiar to most readers of THE LANCET; but the Edinburgh Health Society's pamphlets are directly addressed to the people, whose ignorance exposes them to the wiles of the unscrupulous advertising quack. Dr. Tillie has treated his subject exceedingly well from the popular standpoint, and we hope that his pamphlet will prove a revelation to many deluded sufferers and their friends.

THE GOVERNMENT REPORT ON THE MANUFACTURE OF CHINA AND EARTHENWARE.

THIS is a very valuable report, systematically and—for a Government document—briefly drawn up. The facts adduced are very conclusive and point to the necessity of immediate legislation. The evils of this industry are caused by the dust and by specific lead poisoning, lead being largely employed for glazing and colouring. That these are not imaginary evils the mortality statistics amply prove. Taking such pottery centres as Stoke-on-Trent, Hanley, Longton, and Fenton, the total mortality from all causes among potters after the age of fourteen years shows that 42 per cent. died from bronchitis, 8 per cent. from pneumonia and pleurisy, and 21 per cent. from pulmonary phthisis. The rest of the male population over fourteen years of age, living under the same climatic conditions and in the same district, show very different mortality tables. In the cases of those who did not work at the potteries, only 26 per cent. died from inflammatory diseases of the lungs and 14 per cent. from phthisis. Then, again, we find that the ratio of deaths ascribed to senile decay among potters was 4·5 per cent., while among the rest of the population it amounted to 12·5 per cent. The average age of potters is forty-eight years, and of non-potters fifty-three years. Entering upon the details of the work done, we find that the "pressers," who are exposed to more dust than the other workers, show a proportion of 29 per cent. of deaths from phthisis, whereas that of the trade as a whole is 21 per cent. More dangerous still is the work done by the women termed "china scourers." They are exposed to flint dust. These unfortunate women "break down for the most part within a few years, though some resist the deadly effects for several years." Luckily there are not many flint workers. The report very emphatically shows that all these evils could, in a great measure, be prevented if a sufficient control were exercised over the industry. It is demonstrated that, while many persons work with lead glazes for years without injury, a great many break down very quickly; but "it is easy to tell at a glance between those likely to resist the action of the poison or to succumb to it." Further, it is

[1] THE LANCET, 1839-1830, vol. i.

also easy to tell those workshops where efficient precautions are taken. What is required is the appointment of medical men to prevent persons who are unfitted for the work from entering this dangerous trade, and inspectors to close all workshops that are not properly ventilated and provided with all the means by which the dangers of the work are minimised. There should also be a periodical medical examination of those persons who are allowed to work, so that the effects of the poison may be detected and their work stopped before the mischief has gone too far. Pregnant women should not be allowed to work at all, for the lead either provokes miscarriage or injures the unborn child. Legislation is necessary to give more power for the closing of unsuitable factories or workshops. Some of these are actually situated in damp, ill-ventilated basements. If pressure were brought to bear it is very certain that safer methods of manufacture would be discovered and many thousands of valuable lives would be saved. This matter has been neglected too long, and now that the facts are incontrovertibly established by this useful Government investigation there is no longer any reason for further delay. This is an opportunity for life-saving legislation which should meet with support from all parties in the House of Commons.

A HERBALIST IN TROUBLE.

A HERBALIST, Robert Hickton, of Parnham-street, Limehouse, appeared before Mr. Wynne E. Baxter, coroner, at the Poplar town-hall, to explain his action in the case of Ada Jessie Leonard, aged two years and eleven months, the child of a dock labourer, whom he had treated for bronchitis and measles. The herbalist said he had only been in his business seven weeks, and was not in the habit of prescribing medicine. He kept a shop with the name of "James" over it. He had no medical qualification. He prescribed at the mother's request; he also visited the child. The mother had taken the child to the herbalist believing that he was a medical man, "Dr. James." The coroner explained to the herbalist that he was at liberty to sell any harmless medicines, but that no one but a qualified medical man had a right to prescribe. The jury returned a verdict of "natural death." The coroner remarked that the public exposure would do more good than any censure on the herbalist. The case serves to show the way in which the precious opportunities of saving life among the poor are lost, and how it is that measles accomplishes such a large mortality among the poor as distinguished from those in better circumstances. Though the parish practitioner was called in, his services were sought too late to be of any use, the child dying shortly after his visit.

FIRES IN HOSPITALS.

Two cases of accidental fires which occurred recently in London hospitals have doubtless given rise to an uneasy feeling of insecurity as to possible consequences, which happily were not realised in either of the instances referred to. The presence of mind of the attendants who early discovered the nature of the accident, the convenience of appropriate appliances and of ready exits, combined with the prompt and active service rendered by men of the fire brigade, reduced very greatly the proportions of a threatened catastrophe and prevented entirely any loss of life among the patients or, indeed, any very great disturbance of their comfort. This is a most satisfactory circumstance when we consider how easily the occurrence might have assumed quite a different aspect. The conveyance of the sick, no matter how perfect the arrangements made for its accomplishment, is always more or less difficult on account of their helplessness. Nor is it in such a case as this free from danger. Success even does not always ensure safety, for the shock of a sudden peril barely escaped may and often does derange the whole course of curative treatment and even defeat its ends. It should be remembered also that the hospital is not merely the temporary home of its stricken inmates. It is for the time being a very ark of safety, since nowhere else as within its walls can they be assured of that relief of suffering which is life to them. We might say more to the same purpose, but it is not needful. Every thinking person will agree with us that measures of prevention or of rescue in the actual event of fire must in this case be guaranteed with the nearest possible approach to certainty. As not infrequently happens, inquiry has thus far at least failed to discover the precise cause of the outbreak on either of the occasions above mentioned. In one case a defective flue and in the other a trifling omission in the work of fumigation have been blamed as the probable sources of mischief. The mention of these will no doubt suffice to ensure precaution with regard to them in future. For the rest, we may learn from this experience of averted disaster the value of maintaining the hospital attendants as well as the general administration in a state of preparedness for other than purely clinical emergencies. An inquiry as to the present condition of all hospitals with reference to the possible occurrence of fire might not at the present juncture be inopportune.

A PROPER CLAIM UNDER THE INFECTIOUS DISEASES ACT.

A VERY remarkable case came before Mr. Bros of Clerkenwell under the Infectious Diseases Act. The complainant, Mr. Evan Jones, in July last notified to the vestry a case of erysipelas. When he sent in his list of claims for notification the list was returned with a marginal note as to the case in question—"not erysipelas." The vestry refused to pay the notification fee, and Mr. Jones was driven to assert his claim in the police-court. For the vestry Dr. Yarrow, medical officer of health, was called. He stated, according to *The Times* report, that on receiving the notification he called on the patient and decided that there were no symptoms of erysipelas in the case. He thought she was suffering from a superficial abscess or mere blister. The magistrate said that the complainant had notified a disease in accordance with his opinion and was entitled to his fee. The refusal to pay had cast a slur on Mr. Evan Jones's character. He must be paid the 2*s.* 6*d.* for which he sued, and five guineas costs. The decision of Mr. Bros will commend itself to every fair-minded person in or out of the profession.

THE INTRA-VENOUS INJECTION OF SALINE FLUID.

THERE can be little doubt that the injection of salt solution into the veins constitutes a valuable addition to our therapeutic measures in certain otherwise hopeless cases. We refer more especially to cases of severe accidental or unavoidable hæmorrhage, to severe cases of post-partum hæmorrhage, as well as to cases of extra-uterine pregnancy where there has been rupture of the sac with profuse intra-peritoneal hæmorrhage. It would seem that the injection is also indicated in some cases of severe operation where a large quantity of blood has been lost but less than is needed to prove immediately fatal. In a certain proportion of such cases, although the patient is not pulseless at the end of the operation, death occurs before many hours have elapsed, apparently from secondary syncope. In some cases, of the kind, at all events, it appears probable that the injection of salt solution may avert an unfavourable termination. It is certainly a great step in advance to have it established that the injection of actual blood is unnecessary; for so long as blood was thought to be required the practical difficulties surrounding the procedure were so great that it has but rarely been employed; and it is in the

light of our present knowledge as certain as anything can well be that many lives have been lost solely for the want of some ready means of restoring the volume of the circulating fluid. It is evidently of great importance that the method should be a simple one, and especially that it should not involve the possession of some more or less complex apparatus which the ordinary practitioner could not be expected to have at hand. As regards the fluid to be used, the simplest of all—plain water—will do, since successful cases are reported in which water only has been injected; but it is certainly preferable to use a solution of common salt, the proper strength being one teaspoonful of the latter to a pint of water. Here again, while it is no doubt desirable, if circumstances permit, that the solution should be sterilised, it is abundantly clear that it is by no means absolutely essential. A patient should not be allowed to die from loss of blood, where it is practically certain if let alone she would do so, merely on account of an extremely remote risk of septic poisoning from the water in the kitchen kettle and the salt in the table salt-cellar. Then as to the quantity of fluid to be injected. This should depend on the amount of blood that has been lost, but this often cannot be accurately estimated. It is important to note, however, that a few ounces are of little or no use. In cases really requiring this treatment it is a question of injecting pints. From a minimum of two pints in the less severe cases to a maximum of six pints in the worst cases is the amount of salt solution to be used. This should be continued till the pulse can be felt at the wrist. Opinions differ as to the rate at which the fluid should be injected; some consider that a pint in four minutes is not too fast, while others think that the rate of injection should be a third of this, or less. Probably the actual state of depletion of the circulation causes the rate at which the injection may be safely made to vary in different cases. The temperature of the fluid used should be about the same as that of the body. The actual apparatus required consists only of a cannula and a few feet of india-rubber tubing connected with a vessel to hold the salt solution. The form of the vessel is immaterial; indeed, the tubing, converted into a syphon, may be made to convey the fluid from an ordinary jug. Now that the whole procedure has been so much simplified we may expect to hear of it being more frequently resorted to in the coming year. Certainly no patient should be allowed to die from hæmorrhage without an attempt being made to save her by means of the intravenous injection of salt solution.

THE MYSTERIES OF THE ORANGE TRADE.

AT Bow-street Police-court on Saturday last a prosecution was undertaken at the instance of the Strand Board of Works which resulted in a fine being imposed on the managing director of a Covent Garden fruit business for selling oranges which were unfit for human food. The purchaser, a costermonger, deposed that he bought two boxes of the fruit at the defendant's auction, having been guided in his venture by sample boxes that were on view; but when the boxes were delivered to him he found that the contents of one of them were nearly all rotten, and that a hundred oranges from the other had to be thrown away. Failing to obtain redress from the company, he went to a sanitary inspector in the employ of the Strand Board of Works, who took the inferior box to the magistrate sitting at Bow-street, by whose order it was confiscated. The defence asked the magistrate to say that the salesman was not liable because he was only a middleman between his customers and the shippers, and having regard to the enormous quantities of fruit that passed beneath his hammer, could not possibly know that any particular consignment was unsound at the time of sale. The defendant, who was called, entered into a technical description of the way in which oranges were classified in the fruit trade, according to their soundness. "'Singles,'" he said, "meant that not a single orange in the box was bad; 'doubles' that the fruit was sound as a whole, though the case might be damaged; 'short-cross' that the contents of half the box were bad; 'shorts' that more than half were inferior; and 'long-cross' that all the oranges were very inferior." It was suggested that one box at least of the two in question was marked "doubles," and that the auctioneer would have to rely on such marking, as he could not possibly personally inspect all the fruit. The magistrate imposed a fine of ten pounds. We cannot comment further upon the case, as the magistrate's decision has been made the subject of an appeal.

THE PREVALENCE OF INFLUENZA.

LAST week witnessed another very material decline in the number of deaths directly attributed to influenza in London, there being but 87 as compared with 164, 147, and 108 for the three preceding weeks. The disease, however, seems to be still holding its own in some parts of the provinces. For instance, at Peterborough there appears to have been a considerable increase in the number of deaths from influenza during last week, and a large number of workshops in that city have been invaded by the disease. Owing to so many choristers being down with influenza, the choral services of the cathedral have had to be suspended. We can quite understand that the peculiar tendency of the present epidemic to attack more especially the larynx and pharynx will prove fatal to all vocal music not only during the acute stages of the attack but also for a more or less prolonged period afterwards. Influenza still seems to be rife in Cambridgeshire.

BURSTING BOILERS.

A SERIES of terrible accidents—not unusual at this time of year, but made sadly conspicuous at the present moment by their fatal issue in several cases—has been chronicled during the past week from boiler explosions. Premising that it is not possible to lay down rules by which such catastrophes may be certainly avoided, and entirely recognising that even if a householder finds himself living under dangerous conditions he may not be able for pecuniary or other reasons to immediately alter them, we think a few precautionary words may be useful. It is quite impossible for any but a technical journal to enter into minute plumbing details, nor have they, from a general point of view, anything to do with the matter. We may also discard all reference to low-pressure arrangements, for the use of open tanks—which is what is implied by that term—is so economically faulty that not even safety can quite justify it. Of closed tank systems there are two in common use. In each the boiler feeds and is fed from the hot-water cistern, circulation being maintained by the well-known principle of convection, which cistern in its turn feeds the house with hot water, and is fed from the general water-supply of the house—i.e., from the cold-water tank. In one of these two systems, which we propose to call the high-level system, the hot-water cistern is under the roof in juxtaposition to the cold-water tank, whereby mechanical ease of distribution is secured. In the other, the low-level system, this cistern is on the same floor as the boiler, and generally in the kitchen or scullery, circulation of the hot water to the higher floors being obtained through the downward pressure of the cold water upon it. We need hardly say that the cause of a bursting boiler is primarily the fact that its water-supply has been cut off while the fire beneath it is burning. It will be seen at once that where the communications (pipes and perhaps some smaller intermediate receptacle) between the general cold-water supply and the hot-water cistern are under the roof

they are infinitely more exposed to cold than where they are situated in the warmest part of the house. We should, therefore, expect to find many more accidents prevailing in the high-level system than the low-level, and our inquiries into four of the recent cases, whose disastrous consequences have been made the subject of much public comment, have confirmed this expectation certainly and in every particular in three of them, and probably in the fourth. Next it must be pointed out that there are two forms of this accident, of which one is practically unattended with danger to life, while the other is probably the most dangerous of domestic catastrophes. In each form we find as a primary cause of the accident an empty boiler, from which further water-supply has been cut off through frozen pipes or some other mechanical defect, while the fire continues to play upon it until it becomes red-hot. If now the boiler remains dry, it will in time crack, and the expansion connected with this will do an amount of mechanical damage dependent upon the structure of the house; but the accident, however exasperating and expensive to the householder, is not necessarily attended with risk to life. If, however, through sudden thaw or other reason, circulation is restored and cold water finds its way into the red-hot boiler, immediately the true explosion ensues, caused by the immense pressure that is suddenly put upon the inside of the boiler by the generated steam, and at a time when its walls are undergoing enormous molecular strain. This accident, which is an impossibility in the low-level system, can easily prove fatal to any or all persons in the vicinity by scalding or direct wounds or shock. Moreover, it is impossible to believe that the oft-repeated recommendation that the boiler should be fitted with a safety-valve would in any way obviate such occurrences. A safety-valve will work in cases of gradually increasing pressure; but in the true form of burst boiler the pressure passes in a moment from nothing to infinity, if we may be allowed the little exaggeration, and any attempt at valve-regulation would be futile. The subject is one that should be thoroughly threshed out with a view of arriving at the best preventive measures.

A YORKSHIRE CORONER AND THE SCOTCH OATH.

THE *Bradford Observer* of the 3rd inst. has the following editorial comments on the conduct of Mr. Brown, one of the county coroners for the district in which Bradford is situated, when asked by medical witnesses to administer to them the oath with uplifted hand: "Mr. Coroner Brown has apparently no patience with the new-fangled way in which medical men have begun to take the oath, although a recently passed Act of Parliament leaves a free choice in the matter. Some time ago, when a Keighley medical man asked to be sworn in the Scotch style, Mr. Brown was tart and ungracious, and yesterday again, when another gentleman made a similar request, he rather offensively said that the witness would have to go through the bad language himself. This is rather a peculiar way to talk about a form of oath which is in universal use in Scotland; and there are those in England who maintain that it is 'a simple, solemn, and dignified substitute for the often thoughtless and mechanical form of adjuration' in use in this country." Assuming the correctness of this statement, we must regret that we have been informed of it by a newspaper rather than by the gentlemen so offensively treated by the coroner. It may be taken for granted that Mr. Brown received, with the other coroners, Mr. Asquith's note informing him of the right of any witness or juror to swear with uplifted hand if he desired to do so; and it is intolerable that any witness should be treated ungraciously or offensively because he elected to take the oath in a manner different to that to which the coroner was most accustomed. Are we to understand that his expression, "the bad language," referred to the words "I swear by Almighty God, and as I shall answer to God at the Great Day of Judgment, that I will speak the truth, the whole truth, and nothing but the truth"? We trust that in future any medical witness who may be subjected to similar treatment will send us full particulars. It was in THE LANCET that this new form of oath was first suggested more than eight years ago; it was THE LANCET which brought the 5th section of the Oaths Act of 1888 from obscurity into light; and we shall most certainly continue to endeavour to protect any medical witnesses acting within their legal rights.

THE NATIONAL LEPROSY FUND.

THE cash still remaining in the hands of the committee of the National Leprosy Fund is to be used, in part at any rate, for providing prizes for the writers of the best reports, to be written during this year, on certain subjects relating to the nature and causes of leprosy. Sir Joseph Fayrer, Sir Guyer Hunter, and Mr. Hutchinson have been appointed a subcommittee to decide upon the merits of the reports. This subcommittee have selected ten subjects on which they invite competition; and to the writer of the best report on each subject a sum of fifty guineas will be presented. The ten subjects set by the subcommittee for these competitions are very well chosen. No doubt excellent reports will be received by the subcommittee, and the three gentlemen who compose it will certainly do their best to award the prizes to those who shall have gained them by excellence of work. We may, perhaps, be allowed one word of regret that all three members of the subcommittee are understood to hold strong views in favour of the non-contagious nature of leprosy. The question whether leprosy does or does not pass from the leper to the healthy man is by far the most important subject of which these reports will have to treat, and it would have been preferable if the other view had also been represented.

THE FEES OF MEDICAL OFFICERS TO DISPENSARIES.

A CASE of some importance to the medical profession recently came before the Liverpool stipendiary magistrate. A lad had been convicted of stabbing a girl, who was taken to the dispensary for treatment, and the question arose whether infirmary and dispensary medical officers could be compelled to give to the police certificates of the nature of injuries received by patients who came under their official observation. In the case under notice a medical practitioner at East Dispensary refused to give a certificate as to the nature of the wound unless he was summoned to attend the court and received a fee of 10*s.* 6*d.* Although it had been a custom to grant such certificate, the medical man was not, of course, bound to act in accordance with it, but had a right to enforce any legal claim he might possess. From the statement of the Liverpool stipendiary it appears that within his jurisdiction at least it is compulsory on a medical man to attend and give evidence at the police-court if his travelling expenses are paid and that he cannot enforce his claim for payment as a witness. Putting aside, then, the question of monetary remuneration, the question resolves itself into one of principle and prudence. We are of opinion that in any case of criminal assault it is better that the medical man should be subpœnaed to give his account of the medical aspects of the case, rather than it should be left in the hands of the police to decide upon a medical practitioner's certificate whether the latter should be summoned or not. It does not require professional skill or knowledge to enable a person to say whether an injury has been inflicted, and an officer who takes a patient to a dispensary must have ample opportunity of ascertaining the fact from his own observation and from the verbal statement of the medical

man. There is another objection to writing a certificate. The medical officer may be busily engaged with other patients, and since he is under no statutory obligation to record his opinion with such accuracy as the case deserves it is possible that an act committed in a perfunctory manner might lead to a miscarriage of justice. In the metropolitan police-courts provision is made for the remuneration of medical men for their attendance as witnesses under regulations sanctioned by the Home Secretary. If no such provision obtains at large provincial cities or towns such as Liverpool it is quite time that a reform took place, for it is not just that a medical man, who more often than not renders his dispensary services gratuitously, should be subjected to the annoyance of leaving his professional duties for the purpose of attending as a witness at a police-court without any payment beyond bare travelling expenses. It can scarcely be contended that a medical practitioner's fee of 10*s.* 6*d.* for attending a court of law falls under the denomination "unearned increment."

MUNIFICENT BEQUEST TO EPSOM COLLEGE.

WE learn with great pleasure that the Royal Benevolent College at Epsom has just become the recipient of the munificent legacy of £10,000 under the will of the late Mr. Pugh, the specified object of the bequest being "to create pensioners without residences." The council of the institution propose to create a certain number of "Pugh Pensionerships" of £30 a year each, to be balloted for in May next and for the present to make no alteration in their liabilities towards existing pensioners. All our readers know our hearty interest in the affairs of Epsom College, and will understand the sincerity of our pleasure in chronicling this splendid recognition of its good work. Dr. Holman, the treasurer, in acquainting us with the fact of the legacy, writes:—"It is hoped that the example of the late Mr. Pugh and the large gift you yourselves have given will animate others to assist in this most important work."

THE POST-GRADUATE COURSE, 1894.

THE fifth year of the Post-graduate Course of Lectures will begin on Monday next, and the committee have arranged a very full programme for the benefit of their members. Instruction will be given during the year by certain of the staffs of the following institutions: The Hospital for Consumption, Brompton; the Hospital for Sick Children, Great Ormond-street; the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury; the Royal London Ophthalmic Hospital, Moorfields; the Hospital for Diseases of the Skin, Blackfriars; the Bethlem Royal Hospital for Lunatics; the London Throat Hospital, Great Portland-street; the Bacteriological Laboratory, King's College; the Central London Sick Asylum, Cleveland-street; and the Parkes Museum, Great Russell-street. As there is no regular medical school attached to any of these institutions, except to King's College, the members of the Post-graduate Course and their lecturers will not only enjoy remarkable opportunities of seeing clinical work of all kinds and of learning practical lessons of the most modern description, but are at the same time engaged in developing a valuable side of the institutions by putting the lessons to an obvious use which until recently has been entirely neglected. At King's College the instruction will be given wholly in the Bacteriological Laboratory, the course consisting of eight lectures by Professor Crookshank, and followed in each case by an hour's practical work. This course, more clearly perhaps than any, indicates the purpose of the work that has been and is being done by the organisers of the Post-graduate Lectures, as well as its value. It is admittedly no longer sufficient for a man to passively acquiesce in a germ theory of disease, taking all the proofs and procedures for granted. Any practitioner may nowadays be called upon to display some personal knowledge of bacteriological methods; yet no one whose medical education was completed more than ten years ago can have had offered him at his medical school, unless he occupied some unique position, much opportunity for acquiring such knowledge. It is these unavoidable gaps in the completeness of equipment for a profession whose scope is ever developing that the post-graduate scheme has been designed—and fitly—to fill up. Application for cards of admission to the courses, and for all information, may be made to the Secretary, Dr. J. Fletcher Little, 32, Harley-street, W., whom, with his committee, we congratulate upon having secured the services of a remarkably efficient set of lecturers.

THE LANCET RELIEF FUND.

THE "Application Form" of THE LANCET Relief Fund will be found in our present issue. It can easily be removed, filled up and forwarded to the Secretary, Mr. Edward Davies, THE LANCET Offices, 423, Strand, London. We take the opportunity of directing the attention of those of our readers who may have occasion to employ the form or to sign one of the required accompanying certificates to the necessity of carefully noticing the conditions on which applicants become entitled to a participation in the benefits of the Fund.

THE HARVEIAN SOCIETY.

THE annual meeting and conversazione of the Harveian Society of London will be held on Thursday, Jan. 18th, at 8 P.M., at the Stafford Rooms, Titchborne-street, Edgware-road, W. The President, Mr. Malcolm Morris, will deliver the annual address. It is proposed to hold an exhibition of the various methods by which disease may be depicted, comprising examples of photography, micro-photography, drawing, painting, engraving on wood and stone, electrotyping, modelling, and plaster casting. It is anticipated that a collection of these and other processes, many of which are but little known, will prove instructive and interesting. We are asked to state that all members of the medical profession are cordially invited.

ON MICROBES IN SODA WATER IN INDIA.

WE would call attention to an important and interesting communication in the December number of the *Indian Medical Gazette* from Mr. E. H. Hankin, M.A., the chemical examiner and bacteriologist to the North-Western Provinces and Oudh Government and to the Central Provinces. The communication throws a good deal of light on a probable source of infectious disease in India. It consists of an extract from a report on the aerated water to be met with in the Agra cantonments, and gives a sketch of some of the observations carried out in this respect at the Government laboratory of that city. The tests employed are bacteriological—that is to say, the goodness or badness of a sample is estimated by counting the number of living microbes present in it. The plate culture method is pursued, which in the hands of competent observers is regarded as giving more valuable results with regard to the fitness of water or other liquids for drinking purposes than the older methods of chemical analysis. After explaining the nature and details of the process and stating that the great majority of microbes that exist are harmless, Mr. Hankin adds that the same means by which the harmless microbes have reached the water are open to the dangerous ones, and the same means that will remove harmless ones are capable of removing those that are dangerous to health. "One native manufacturer in the Lal Koti bazaar in Agra is supplying his customers with soda water that contains 16,400 microbes in a cubic centimetre, which is something over nine millions in a pint. It is possible that none of these are dangerous;

it is probable that only a very few are of this nature. Obviously the chance of infection is much less in the case of the soda water made in the Royal Artillery factory and containing only six or seven hundred in a cubic centimetre." A series of surprise visits—the details of nine are given—were made to all the soda water factories in cantonments, with the important and unsatisfactory results set forth in the communication under review. An interesting and perhaps useful point appeared in the course of these researches, which Mr. Hankin says has recently been confirmed by other workers—namely, the fact that the carbonic acid gas in the soda water acts as a poison to the microbes, so that a bottle of soda water which was teeming with bacteria when first made is generally perfectly free from them at the end of a week. Soda water in India, it may be remarked, owing to the high temperature, has to be bottled at a much higher pressure than in England (180 lb. as against 30 lb. or 40 lb. per square inch), and it is considered probable that in the Indian soda water this higher temperature and pressure greatly aid the action of the gas. The results of experimental observations are detailed in connexion with the cholera microbe, which appears to be the easiest to kill, the typhoid microbe and others, and the paper concludes with the remark that the risk of infection from bad soda water can be avoided if it is kept for a week or more before use.

LECTURES FOR SANITARY OFFICERS.

THE authorities at the Sanitary Institute announce a series of lectures and demonstrations which will be given in the Parkes Museum on Tuesdays and Fridays during the coming Easter term, and which have been designed to meet the practical needs of sanitary officers. Dr. Sykes, the medical officer of health for St. Pancras, will commence the course with two lectures on "Elementary Physics," and will be immediately followed by Sir Douglas Galton on "Ventilation, Warming, and Lighting." Among other lecturers whose services have been secured we note in the official programme the names of Professor Corfield, the medical officer of health of St. George's Hanover-square, who will expound "Sanitary Appliances"; Mr. Wynter Blyth, who will discuss the "Diseases of Animals in relation to Meat-supply," dealing also with the characteristics of vegetables, fish &c. which are unfitted for human consumption; Dr. Hamer, assistant medical officer of health for the County of London, whose subject will be "Infectious Diseases and Methods of Infection"; Dr. Arthur Newsholme, medical officer of health of Brighton, and Dr. Bostock Hill, medical officer of health for Aston Rural District, who will treat of the "Nature of Nuisances" and "Trade Nuisances" respectively; and Dr. Louis Parkes, medical officer of health of Chelsea, who will deal with "The Sanitary Laws and Regulations Governing the Metropolis." The instruction offered by these members of the profession will be properly supplemented by lay addresses—properly, because it is evident that it is not alone the medical aspect of a question at which a sanitary authority is required to look. Mr. Law, M.Inst.C.E., will give instruction on "The Principles of Calculating Areas and the Interpretation of Plans"; Mr. Wallace Pegg, Assoc.M.Inst.C.E., will lecture upon "Water-supply and the Pollution of Water"; Mr. Keith Young, F.R.I.B.A., will treat of "Sanitary Building Construction"; Mr. J. Wright Clarke, of "Plumbers' Work"; Mr. W. C. Tyndale, Assoc.M.Inst.C.E., of "House Drainage"; and Mr. H. Robinson, M.Inst.C.E., and Mr. Charles Mason, A.R.I.B.A., surveyor to the vestry of St. Martin's-in-the-Fields, respectively of "Sewage Disposal" and the "Disposal of House Refuse." It will be seen that the Sanitary Institute have arranged a very full and practical programme, and the course, which includes also personally-conducted tours of inspection of water-works, sewage-construction, disinfecting-stations &c., cannot fail to be of high value to those for whom it has been prepared. The fee to the public for the whole course is £1 1s., to surveyors and inspectors holding office half that sum, while members and associates of the institute will be admitted without payment.

ROTATION OF THE SPLEEN; REMOVAL.

AT the General Hospital, Birmingham, on Jan. 2nd, Dr. Malins dealt with a very interesting case, in which he removed the spleen, weighing 2 lb. 5 oz. The patient, a woman aged thirty, was admitted two days previously with a tumour of the abdomen occupying a central position and dipping into the pelvis. There was some peritonitis present. The abdomen was opened in the median line and a peculiar condition was found. The spleen, altered in shape and position, was rotated on its attachment for about half a revolution; it was dark coloured and much distended, and the vessels on the distal side of the strangulation were completely thrombosed. A prepared silk ligature was tied round the pedicle and the organ was removed. The abdomen, containing reddened fluid, was carefully sponged out and some adhesions of the omentum were tied. Up till the present time the patient has done remarkably well. The spleen is in the hands of Dr. Stanley, the pathologist to the hospital, and further details concerning the case will no doubt be published later.

THE DIFFUSION OF SMALL-POX.

THE number of places attacked by small-pox is still increasing, although the newly infected districts are not, as yet, suffering heavily. Last week the number of persons attacked were: West Ham, 10; Birmingham, 27; Bradford, 12; Nottingham, 9; Aston Manor, 8; Bristol, 6; Oldham, 5; Smethwick, Handsworth, Chadderton, Manchester, Rowley Regis, 2 each; and there were a number of single attacks in other places, including Leicester. There is also small-pox at Oxenhope, Aberavon, &c. At Bradford a site for a new small-pox hospital has been decided on. From Leicester we learn that of 281 cases of small-pox 126 patients were unvaccinated, of whom 13 died; 83 of these patients were under ten years of age, 9 cases being fatal. On the other hand, no case of small-pox in any vaccinated person under ten years of age occurred, and of the 155 cases of persons vaccinated in infancy, but not revaccinated, there were no deaths; in short, Leicester once again supplies the most conclusive evidence in favour of a recent vaccination as a protection against small-pox. In other respects, however, the experience to be derived from Leicester is not encouraging. The erection of mere wooden sheds placed 600 feet further from the population than are the present wooden sheds by which that population has been infected is not a solution of the question worthy of Leicester, a town which professes so much as regards isolation and which has, all along, been a byword of caution in respect of the miserable means of isolation it has afforded. The number of patients from the metropolis who are under isolation by the Metropolitan Asylums Board remains practically the same; it ranges from 80 to 90.

THE LONDON COUNTY COUNCIL ON PARAFFIN LAMPS.

WITH a view to the prevention of the still too frequent occurrence of accidents from the use, or rather the misuse, of paraffin lamps, the London County Council have issued a most sensible and instructive summary of directions to be observed by those who employ this form of artificial light. So excellent and appropriate is the whole series of recommendations that it seems almost invidious to select any as being worthy of special notice or to attempt an addition to their number. We need hardly say that it is in no such spirit that we briefly direct attention to certain of these

regulations as being of more prominent importance. We are pleased to see that the security obtained by a broad and heavy base is insisted on. The substitution of a metal for a glass or china reservoir is no less justly recommended. A wick—soft and not tightly plaited, dried, and saturated with oil—reaching to nearly the bottom of reservoir, which should be filled with oil each time the lamp is lighted, and kept free from charred products &c., further and effectively provides against the possibility of explosion. An extinguishing apparatus is recommended, though for obvious reasons no special form or method can be advocated in a series of general directions. If we were to try to add anything to this excellent code we would advise that the apparatus in question should be of a self-acting character. Some contrivances of this kind are extremely simple and inexpensive, and their addition to the ordinary lamp machinery, while it entails but a trifling additional outlay, is well worthy of adoption on the score of security against accident should the lamp be accidentally upset.

INFLUENZA IN THE DOUBRUGHA.

A CORRESPONDENT, writing from Kustendji, Roumania, on this subject, says:—"Influenza is now very rife in this town. The first cases I noticed occurred on Dec. 23rd and the number has been daily increasing. The disease is of a mild form with few exceptions. It is ushered in with general malaise, pains in the muscles and bones, and severe pain down the spinal column from the neck to the lumbar region. The feverish symptoms last for about two days, and catarrh of the bronchial tubes exists in almost every case. In some neglected cases in the first stage I have found one or both lungs pneumonic. Gastric catarrh was present in other cases; in fact, the symptoms vary greatly in each case—in one the stomach, in another the heart, and in a third the lung is the part most affected. Up to the present aoults seem to suffer the most. Severe cephalalgia has been the first symptom in four of my cases, and in one of these profuse epistaxis occurred. The treatment I have found most effectual is aperients at the beginning, phenacetine where there is cephalalgia, then diaphoretics in combination with tolu, salicylate of soda and antipyrin. In cases complicated with pneumonia or gastric catarrh &c., I have, of course, adopted measures suited to each. I may mention that the weather for the last month has been as mild as spring, but very damp. It still continues to be very damp, with a slight frost at night and strong N.E. wind. At this season the weather here should be hard frost, say, from 18° to 20° below zero, and dry, strong, northerly winds. Only last week I saw some sparrows mating and carrying feathers in order to build their nests."

FOREIGN UNIVERSITY INTELLIGENCE.

Bonn.—Dr. Kocks has been promoted to the rank of Professor.

Halle.—Professor Fehling, of Basle, has been offered the chair of Midwifery in succession to Dr. Kaltenbach.

St. Petersburg (*Military Medical Academy*)—Dr. L. Bellyarminoff has been appointed Extraordinary Professor of Ophthalmology.

Vienna.—Drs. Hochenegg and von Hacker have been promoted to the rank of Extraordinary Professors of Surgery.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Adolf Heider, *privat-docent* in Hygiene in the University of Vienna.—Dr. Strohl, formerly Professor of Pharmacology and Hygiene in the Strasburg Medical School.—Dr. Quinquaud, *professeur-agrégé* in the Paris Faculty of Medicine.

AT the next meeting of the Epidemiological Society, to be held on the 17th inst. at 8.30 P.M., Dr. J. C. M'Vail will read a paper on the Aerial Convection of Small-pox from Hospitals. The subject is one likely to prove of more than ordinary interest to epidemiologists.

THE January meeting of the Convocation of the University of London will be held at the buildings in Burlington-gardens on Tuesday, the 16th inst., at 5 P.M. The Report of the Royal Commission has not yet been signed, and the agenda, therefore, will be devoid of any medical interest.

ADVICES from Cape Town convey the information that the Government of Cape Colony has considered it expedient to appoint a commission for the purpose of taking evidence on points connected with the nature, treatment, and diffusion of leprosy.

THE Lord Chancellor has appointed Mr. John Davies Cleaton, M.R.C.S., to be an Honorary Commissioner in Lunacy, in the room of Mr. Harry Tichborne Hinckes, resigned.

THE vacancy caused by the resignation of Mr. J. D. Cleaton, M.R.C.S., as lunacy commissioner has been filled by the appointment of Dr. John Augustus Wallis, lately medical superintendent of the Whittingham Asylum, Preston, Lancashire.

DR H. D. LITTLEJOHN, Lecturer on Medical Jurisprudence and on Public Health, Surgeons' Hall, Edinburgh, has been elected a Foreign Associate of the Société Française d'Hygiène.

DR. FRANKLAND, Sir Douglas Galton, Professor von Helmholtz, the Duke of Devonshire, and the Marquis of Salisbury have been elected hon. members of the Institution of Civil Engineers.

THE LATE PROFESSOR CHARCOT.

DR. BRISSAUD, who has been appointed provisionally Lecturer on Nervous Diseases at the Salpêtrière, inaugurated his course of lectures by rendering homage to his late illustrious master, Professor Charcot. If his language to our English taste savours somewhat of hyperbole, it must be remembered that all the circumstances under which the address was delivered, as well as the speaker's nationality, conspired to account for the generosity of his words. Begging for the indulgence of his hearers, he said: "The task before me is difficult and painful. I have been appointed to follow temporarily, in this the first chair of the first clinique in the world, that eminent and illustrious master, that incomparable professor, who throughout the last twenty years was the greatest ornament of our profession, and whose name will be handed down to posterity among the greatest of our physicians. It does not become me, who am only his pupil—and proud of the fact—to pronounce any eulogy upon him. He desired that there should be silence over his grave, and as none of his colleagues have yet spoken of him, I shall not claim the glory of being the first to celebrate his memory. I will therefore say nothing of his work, which moreover transcends all panegyric, and is in itself sufficiently eloquent. Time will not efface it. Before Charcot the whole of a science had yet to be established, though Duchenne of Boulogne had made some advances in that direction. But neuro-pathology existed only in name. Professor Charcot elevated it to reality, and his historic collaboration with Vulpian at the period when these two young enthusiasts, friends from childhood, first started on their career at the Salpêtrière marks the date of its true origin. But, while Vulpian left the hospital in order to dedicate himself to the physiological work which has rendered him so justly famous, Charcot remained there, gradually

enlarged little by little his clinical investigations, and finally inaugurated that form of teaching which is so well known to us by the vastness of its results, to which he devoted the whole of his life, and from which death alone has torn him. It was by this teaching that he founded a new science, and you know with what brilliancy he has expounded it from the very first, so that his work became at once clear and universally intelligible. Not a word or line of his has ever been contested, for it was impossible to do so. He only concerned himself with facts and always neglected imprudent hypotheses and generalisations; and to the same degree that he knew how to estimate his facts with the perspicuity and penetration which mark the true observer he also knew how to present them in their natural—that is logical—order. This is the simple reason which will make the work of Charcot lasting. It is all so clear, so full of honest good sense. The scientific edifice which he has built defies all assaults and is therefore all the better able to resist the pin-pricks of peevish criticism. From every side his work has evoked the unanimous and spontaneous admiration of all true philosophers—that is, of all who without jealousy of school or nation welcome light as it emerges from darkness. If it is not exactly my place to praise the works of Charcot I am at least right—it is even my duty—to tell you that from the bottom of my heart I feel towards him the gratitude due to a perfect master. I cannot express to you the emotion, the surprise, and, above all, the feeling almost of repugnance that arises in me at finding myself here in the very place which he occupied barely three months ago. For as many as twenty years he always displayed a sympathetic affection for me. When in 1874, without having seen him previously, I came to seek a post as *externe* he received me with coldness and indifference, which, fortunately, did not discourage me; yet from the very day that I entered upon my duties I was overwhelmed with the kindness which he showed me and the proofs of affection with which he loaded me. He, as it were, took me by the hand to guide me in my career. He lavished upon me good advice, encouragement, and kind words in moments of difficulty. His affection never failed, and culminated in that supreme mark of confidence which he showed when he entrusted his son to my care as *interne*. I am sure that I may speak not only for myself, but that I interpret the feelings of my colleagues—of all those who have shared with me the honour of being his pupils—when I assert that from the start of our career to its present point we owe it all to him. Whoever was his pupil belonged to his family; his house was open to us all, and with what cordiality he received us! He was our master in the classical, almost Biblical, acceptation of the term, for his pupils were his *disciples*, and disciples are the collaborators of the master. He had consented that we should become his kith and kin. The greater part of his works bore by the side of his signature that of one of us. When one is fighting for the same cause one feels in intimate union with one's master despite the claims of discipline, and his affection was none the less lively though he could be severe. We have heard from some people that his affection went so far as partiality; but who were they in whose favour their master's partiality was displayed? They were Cornil, Bouchard, Bourneville, Joffroy, Debove, Gombault, Pierret, Raymond, Pitres, Gilbert Ballet, Féré, Pierre Marie—to cite only those whose hair is already white and who have in their turn become masters. Charcot was proud of almost all and very proud of some of his pupils. And they on their side, had they not the right to be still prouder and to feel vibrating in their bosoms the tender emotion described by Horace—'O et præsidium et dulce decus meum?' The anxiety that he felt for all of us, which was really a kind of paternal tenderness, can only be understood by those who have shared his laborious life. He elicited from us that filial respect of which he was so jealous; but he knew that he could count upon us, he had full confidence in us and never suspected the fidelity of any of his pupils. His predilection for those whom he had made his own was not exclusive. All students here, without exception, French or foreigners, could make good a claim to work under him. The school of La Salpêtrière has never been a closed sanctuary; its doors have always remained widely open as a place of refuge. I call on physicians, chemists, psychologists, physiologists, and even artists, who have received here suggestions, information, and inspiration, to bear witness to this fact. I call upon medical men from all countries, regardless of race or language, to bear witness that they found in working under Charcot, in his laboratory, in his library, and in his personal stores of knowledge, the true source of much original work for which he never sought to claim priority. But I must conclude. I should like to have said more, and to have said in better terms what I feel; to have described more vividly the grief of all my colleagues, new and old, and their attachment to those to whom this loss is most cruel, and, above all, to his son, whose presence among us will keep green his memory. Pascal says that the first homage that we owe to the dead is to do, when they are gone, what they would have had us do while they lived. You know what homage we intend to render to the master who is no longer among us. We will work, we will change none of the traditions of this place, and we will spare no efforts. I hope that this year will be a fruitful one, and I may say that, for my part, I will devote myself to this object."

STATISTICAL REPORT OF THE HEALTH OF THE NAVY FOR 1892.

THIS report from the Director-General of the Medical Department of the Navy has just been presented to Parliament. The report itself occupies 108 pages, and it is supplemented by an appendix consisting of nearly 100 more pages of statistical tables. The former first of all deals with the vital statistics of the force as a whole and the naval hospitals at home and abroad, the lunatic asylum at Great Yarmouth, the dockyards and Royal Marine Divisions, and is followed by separate sections in which the various stations at home and abroad are respectively considered, with one on the irregular force, which in 1892 consisted of thirty-seven vessels, besides the crews for the relief of ships recommissioned abroad and their relieved crews on passage to England. The report for 1892 follows the well-known pattern of its predecessors, and the information—which is mainly statistical or observations arising from statistical results and comparisons—is well arranged and presented in a clear and concise form. The report is illustrated by numerous useful maps. From the nature of the publication and from the very condensed way in which the facts are set forth it must needs be that any notice or review of the report will be to a great extent a repetition of its information or a selection from different portions of it. Dealing with the total force, we learn that the returns may be considered as very satisfactory. The aggregate number of cases of disease and injury furnished a ratio of 934·39 per 1000 of the mean force, which is the lowest recorded since these reports were first published in their present form in the year 1856. On the Mediterranean station the health of the squadron has undergone considerable improvement, especially as regards the number of cases of fever, as compared with 1891. On the other hand, there has been a great increase in malarial fevers on the West Coast of Africa and Cape of Good Hope stations, arising principally from operations of naval forces on shore, which consisted of expeditions up the River Gambia and up the Great Scarcies river. The total force in the service afloat in 1892 was 58,330 officers and men. The total number of cases of disease and injury entered on the sick list was 54,503, which, as already stated, is in the ratio of 934·39 per 1000, and a decrease of 62·19 per 1000 as compared with the average ratio of the last five years. The average number of daily sick is in the ratio of 41·69 per 1000; the number of days' sickness on shipboard and in hospital in the total force gives an average loss of service from disease and injury of 15·25 days for each person; and the total invaliding rate was 26·21 per 1000. But the ratio of those finally invalided from the service is 17·5 per 1000, which represents the loss to the service from this cause for the year. The death-rate for 1892 was in the ratio of 5·58 per 1000, which is a decrease of 0·59 per 1000 as against 1891, and a decrease of 1·23 on the average of the last five years. The total number of deaths was 326; of this number 260 were due to disease and 63 to injury. Compared with 1891 there was an increase in the death-rate on the home, North American and West Indian, and West Coast of Africa and Cape of Good Hope stations, and a diminution on all the other stations. A reference to table No. 4 in the appendix will show the ratio per 1000 of force of all cases of disease and injury as well as of the invaliding and mortality from the different classes of disease and injury on the various stations during the year. As regards the prevalence of some of the different diseases, we may note that there were 13 cases and 2 deaths from small-pox, 133 cases of scarlet fever, 128 of which

occurred on the home station, leaving only 5 cases to be accounted for at the remaining stations. A single case of typhus fever is recorded in the reports of the home stations. There were 336 cases of dengue during the year, all of which occurred on the East Indies station. Simple continued fever shows 1576 cases, and there were at home and abroad 171 entries for enteric fever during the year. Of the latter, 42 were fatal; the invaliding were 23. A solitary instance of yellow fever, which proved fatal, occurred in the records of the irregular force. There were 37 cases of dysentery shown in the returns, 5 of which only were on the home station, the remainder being abroad. Influenza appears to have been somewhat prevalent and widely spread. There were 2429 cases in all, of which 827 appear in the records of the home stations, the remainder being in those of stations abroad. Only seven cases of diphtheria are recorded, two of which proved fatal. Of malarial fevers 1412 cases were returned, 13 of which ended fatally, and 178 were invalided. The highest number is reported from the West Coast of Africa and Cape of Good Hope station, which contributes 582 to the aggregate. Under the heading of venereal diseases there were 8636 returned; of these, 2773 were of primary syphilis, 1530 of secondary syphilis, and 4333 of gonorrhœa and its sequelæ. As regards syphilis, the ratio is 47·53 per 1000 for the primary form and 26·23 per 1000 for the secondary form of the disease. Both show a decreased prevalence on that of the previous year; but while there is a diminution of 11·56 per 1000 under primary there is an increase of 2·71 per 1000 under secondary syphilis as compared with the ratios of the last five years. Under the heading of tuberculous diseases we find that 53 cases are returned, of which 18 were invalided and 11 died. The ratio of cases for the total force was 0·9 per 1000, of invaliding 0·3 per 1000, and of deaths 0·18 per 1000. The wounds in action occurred in the forces landed for operations up the River Gambia.

(To be concluded.)

CHOLERA.

ACCORDING to the latest intelligence, it appears that there is very little cholera in Constantinople at the present time. Some three or four cases are stated to have occurred daily, about half of which number were fatal.

The epidemic at Teneriffe may now be spoken of as the late epidemic, as it is entirely at an end, no cases having occurred since Dec. 22nd last.

We learn from India that one of those sudden and severe outbreaks of cholera on a limited scale, so frequently met with in India, has occurred at Nowapara, on the Eastern Bengal State Railway, resulting in several fatal cases among the railway native employés and villagers.

The cholera epidemic continues in St. Petersburg, the number of patients under treatment for cholera in the Russian capital having risen in less than three weeks from 15 to 166. The increase has been very steady between the dates of Dec. 12th and 27th, the statistics showing an increase of exactly 100 cases under treatment. From noon of Dec. 12th to noon of Dec. 13th there were 16 new cases, 5 deaths, and 66 under treatment. On the 28th there were 21 new cases, 14 deaths, and 166 cases under treatment. This sudden revival in the activity of the cholera epidemic has not yet been fully accounted for, but it has been considered possible that it is associated with the increased consumption of salt-fish taking place in connexion with the Christmas fast (Rvjdestvenski), which commences at the end of November. A commission of physicians does not, however, endorse this view.

THE CHOLERA EPIDEMIC IN TENERIFFE.

BY H. ATHILL CRUTTWELL.

WE have received the following communication from Mr. Cruttwell, who was sent in the month of December, on behalf of the Spanish National Telegraph Company, to inquire into the alleged prevalence of cholera in the island of Teneriffe:—

"The ports of the island of Teneriffe were declared to be infected by cholera on Nov. 21st, 1893. Though cases had been occurring for over a month prior to this date, it was not until Nov. 10th that specimens of dejecta &c. were forwarded to Madrid to be examined by experts. The result of the investigation, which was carried out under the direction of Dr. Mendoza of Madrid, was an official declaration that the disease was Asiatic cholera, and the ports were closed. Up to this date (Nov. 21st), from the 1st of the same month, 249 cases and 92 deaths had been registered.

"The tracing of the origin of the cholera outbreak here presents many difficulties. Few of the medical men now practising in Santa Cruz had had any previous experience of the disease, and many cases occurred during October, and even in September, which were then diagnosed and registered as 'acute diarrhœa (non-choleraic),' 'acute enteritis,' and 'spasmodic colic,' but which are now said to have been true cholera. Thus the exact date of the first case or cases is unknown, and the proximate date is difficult to fix. One case, resulting in recovery, which presented choleraic symptoms occurred in the third week of September, and several others in the following week. All through the summer ships sailing from ports in which cholera had appeared were rigidly quarantined here, and no cargo or passengers were allowed to be disembarked; Spanish ports, however, were exempt from this rule, and vessels called and landed cargo and passengers from Barcelona, Malaga, Valencia, and Cadiz. In the first-named town cholera was believed to exist, and it may be that Spain was the original source of the disease.

"On the other hand, the general opinion here among the people and the medical men is that an Italian ship brought cholera to the island. During the second week in August the s.s. *Remo* sailed from Genoa for Rio de Janeiro, having on board a general cargo and Italian emigrants. While at sea, on a date which cannot be ascertained here, cholera and typhus fever broke out. On reaching Rio de Janeiro in the first week of September the port authorities refused to allow any communication between the ship and the shore, and she set sail again for Europe. On Sept. 29th the *Remo* called at this port, Santa Cruz de Teneriffe, being short of coal and fresh water. The medical officer of the port visited her and ascertained that there had been 123 cases of cholera and 37 deaths, 26 deaths from 'common maladies,' and 10 cases of typhus fever, resulting in 3 deaths, since her departure from Genoa. The ship was immediately ordered to proceed to the quarantine station four miles south of the town and anchor there. Coal and fresh water were supplied to her, with the strictest precautions against possible infection. The coal was taken on board in bags from barges alongside; each bag that reached the deck of the ship remained on board and was carried away in her. The bags were slung on board at the end of an iron chain, which was the only article on board the ship which was touched by those on the barges. The water was pumped from water barges, using their own hose, into the ship's tanks, and this hose, at the termination of the work, was cut off close to the barge and carried away by the ship like the coal bags. As an additional precaution the captain of the *Remo* was ordered to prevent any water, refuse, or dejecta from being thrown overboard until he was well out at sea, but it is doubtful whether this was done. At sundown all work was stopped and the *Remo* left at once.

"Among the men engaged in the work described, one case of cholera at least is known to have occurred on Oct. 2nd—that is, within three days; this man recovered, but the woman who nursed him died from cholera two or three days later. These cases appeared in the south quarter of the town; others quickly followed. When the news spread abroad that there was cholera in the town all those who could do so went into the country, and the disease was soon afterwards reported from nearly every village and town in the island. I have been unable to obtain any official statistics of an earlier date than Nov. 1st; from that date to the present (Dec. 24th), when no cases have been declared for two days past, the figures are as follows:—

	Cases	Deaths
For the week ending Nov. 7th	17	18
,, ,, 14th	59	36
,, ,, 21st	234	50
,, ,, 28th	399	71
,, ,, Dec. 5th	337	53
,, ,, 12th	167	33
,, ,, 19th	59	13

On Dec. 20th 6 cases and 1 death were registered, on the 21st

2 cases, and on the 22nd 4 cases and no deaths. The highest number of cases registered in one day was 83 on Nov. 26th, and the highest number of deaths, 14, was reached on two days in the same week—viz., on Nov. 25th and 28th. The population of the town during the past three months is officially estimated as 15,000. Since Nov. 1st there have been 1559 cases and 275 deaths. During the whole period of the outbreak the disease has been confined almost entirely to the poorest of the inhabitants; scarcely any cases have occurred among the well-to-do. The lower classes, for the most part, live in single-room dwellings absolutely devoid of any sanitary arrangements. All refuse is thrown into the streets or on to the sea-shore, night-soil fouls every street in the place, cesspools abound, and many of them during the recent scare were found to be very defective and leaking into wells and drains. The chief water-supply is brought from a spring rising in a small forest among the hills seven miles inland and some 2000 ft. above the sea level. The stream is conducted through a brick-and-stone cemented culvert into the town and distributed to the various public fountains and private houses. This culvert is, the greater part of the way from the source, covered in, but in a few places it is left uncovered for the convenience of the inhabitants of a series of scattered huts near which it passes. These openings have been strictly guarded by armed police during the presence of cholera and the supply has been uncontaminated. Each village and town has so strictly isolated itself from the rest of the island that it has been impossible for me to visit any of them, or, indeed, to leave the capital, so that I am unable to give any details as to the ravages of cholera except in Santa Cruz. The epidemic was officially declared to be at an end on Dec. 27th, and no cases have been reported since the 22nd inst.

"Santa Cruz de Teneriffe, Dec. 30th, 1893."

THE LOCAL GOVERNMENT (ENGLAND AND WALES) BILL.

THIS is the correct title of the measure commonly described as the Parish Councils Bill, which has engaged almost exclusively the attention of the House of Commons since it began its extra session in the first week of November. To speak of it as a parish councils bill is obviously a mistake, for it does a great deal more than create parish councils, and having regard to the fact that the measure is now through the committee stage it may be of advantage to give some account of what its provisions exactly are. In its original form the bill consisted of seventy-one clauses, but the committee stage has added slightly to its bulk. It is divided into five parts, one dealing with parish meetings and parish councils, the second with guardians and district councils, the third with areas and boundaries, the fourth with supplemental provisions, and the fifth with what are described as transitory provisions. In addition there are two sets of schedules, which naturally come in at the end of the Bill. When in the month of March Mr. Henry Fowler, President of the Local Government Board, made the motion for leave to introduce the Bill, he explained that his scheme was to have a parish council for every rural parish with a population of 300, but at the same time he let it be known that he was not tied to any particular figure. The result of the proceedings in committee has been to give a council to every parish with a population of 200, this change bringing in a very large number of parishes which, according to the original plan, would have been excluded from this advantage. For the parishes below the limit of 200 arrangements are made either for exceptional treatment or for grouping together; but whether the population be great or small provision is made for a parish meeting as distinguished from a parish council in every rural parish. This meeting, to which all parochial electors are eligible, is to assemble at least once in every year, and the proceedings are not to be begun before six o'clock in the evening. The arrangements for the constitution of the parish council are mainly these: it shall be chosen from among the parochial electors, the members shall not be less than five or more than fifteen in number, no person shall be disqualified by sex or marriage, and the period of service shall be one year. The powers and duties imposed on the parish council are considerable. They include the appointment of overseers of the poor, and the power and duties of the vestry and the churchwardens, except so far as they relate to the affairs of the Church or to ecclesiastical charities. The parish council will have the same power of making any complaint or representation as to unhealthy dwellings or obstructive buildings as is conferred on inhabitant householders by the Housing of the Working Classes Act, 1890, but without prejudice to the powers of such householders—that is to say, they may complain or represent, irrespectively of anything the parish council may do. Other powers conferred on the parish council are the acquisition of land for recreation grounds and public walks, the use of wells, springs, and streams in certain circumstances for obtaining water for the parish, and the treatment of "any pond, pool, open ditch, drain, or place containing or used for the collection of any drainage, filth, stagnant water, or matter likely to be prejudicial to health by draining, cleansing, covering it, or otherwise preventing it from being prejudicial to health, but without interfering with any private right or the sewage or drainage works of any local authority." It is, however, expressly stipulated that nothing in this connexion shall derogate from the obligation of a district council with respect to the supply of water or the execution of sanitary works. Powers are also given in regard to the acquisition of land by voluntary arrangement and compulsion and the hiring of allotments. A number of restrictions upon expenditure are imposed. For instance, a parish council shall not, without the consent of a parish meeting and the approval of the county council, incur any expense or liability which involves a loan, and, again, the rate levied by a parish council for its expenses, other than expenses under any of the adoptive Acts—such, for example, as the Baths and Washhouses Acts or the Public Libraries Acts—shall not exceed 6*d.* in the pound for any local financial year. In the very heart of the Bill are to be found a number of important provisions as to the election and qualifications of boards of guardians, provisions the discussion of which occupied a very large part of the committee stage. One of these lays it down in a single sentence that there shall no longer be *ex-officio* or nominated guardians, while another enacts that "each elector may give one vote and no more for each of any number of persons, not exceeding the number to be elected"—this latter abolishing what is known as the plural vote.

The arrangements as to district councils can be stated very briefly. The Bill simply says, that in future urban sanitary authorities shall be called urban district councils, and their districts urban districts; and later on provides that for every rural sanitary district there shall be a rural district council, whose district shall be called a rural district. Distinction is given to the chairman of a district council by making him, by virtue of his office, a justice of the peace for the county in which his district is situate. If the chair should happen to have a lady for its occupant, she will not share this distinction, words having been inserted during the committee stage to debar her. In addition to the duties and powers of the sanitary authority the rural district council takes over those of the highway board, unless the county council procure the latter a respite, the utmost limit of which is three years. As to the further powers of district councils generally they include the preservation of rights of way, the prevention of encroachment upon roadside wastes, the licensing of the various small traders, and the fixing of fairs. Several long debates took place on the question of "the appointed day," that is to say, the day when the Act should come into operation. Mr. Fowler explained that the hope of the Government had been to pass the measure in the course of the month of August last, and thus permit of the different elections necessary for the appointment of parish and district councils taking place in the month of April. Under the altered circumstances such a thing was, of course, impossible, and it was ultimately arranged that for the first elections the date should be Nov. 8th of the present year. Another point which occupied a good deal of time was the qualification or disqualification of women. The result of its discussion was a clause providing that a woman shall not be disqualified by marriage from being on any local government register of electors, or from being an elector of any local authority, provided that a husband and wife shall not both be qualified in respect of the same property.

THE ISLAND OF MADEIRA.

(*Continued from p. 59.*)

HAVING taken our readers across the sea to Madeira after a four days' journey, during which period they have obtained in the most objective form some idea of sea climate, it is of importance to indicate the bearing this experience has on the correct estimation of the value of the climate of this island. We have before us the weather statistics of the place from 1823, the period at which THE LANCET first saw the light. That was the year during which Drs. Heberden and Heineken were engaged in making the first systematic meteorological observations which have been obtained concerning Madeira. The figures are in strict accordance with those obtained under our own supervision during the month of December, 1893. These facts afford a very impartial guarantee of the regularity of the climate, not only from month to month, but from year to year, during the long period of seventy years.

In looking into the literature which has appeared on the subject of climate generally, it is evident that the figures stated are not always reliable as scientific records, and in many cases it is impossible to attach much importance to them unless they have been recorded by competent observers. The statistical errors which have from time to time appeared in articles on health resorts, are probably the result more of accident than of design. They, however, throw a considerable shadow on the other subjects with which the writers have had to deal. An instance of this occurred in a series of articles which appeared some five or six years ago in the *Daily Telegraph*, depicting in some very high-flown language the Canarian Archipelago. The climate of one island is described as an "unchanging mixture of warmth and coolness." The equability of Las Palmas is thus described: "You sally forth," observes the writer, "say in the morning, to take the air before breakfast in the pretty *patio* in this hotel, and in passing you make a reading of the thermometer at 60°. In the forenoon, at midday, in the afternoon, its record in its sun-sheltered spot remains the same. It registers 60° at nine o'clock at night as you go out into the courtyard to smoke your last cigar. Perhaps you fall asleep in your wicker arm-chair and do not wake till midnight: it registers 60° still."

As a record of equability of temperature this one cannot be beaten. There are, however, some facts which tend to make us believe that the thermometer which was responsible for recording so uniform a temperature might have been mirrored inside—a dodge not unknown in the hotels of many seaside resorts. The temperature of the place has certainly shown considerable variation since this record was taken, and, indeed, the figures given in a book on the Canary Islands by a credited authority show a variation of temperature during the very year in which this was written amounting in some cases to nearly 12° F.

Madeira makes no claim whatever to so fabulous an equability as is recorded in the above extract. It claims to possess an equable "ocean climate," and the facts placed at our disposal seem absolutely to bear this out. An ocean climate should possess a high degree of purity of air, a high atmospheric pressure, and equability of moisture and temperature, all of which particularities have a definite effect upon the organism. Mr. Leopold Hudson, in a communication addressed to us regarding this subject, remarked on the very interesting fact—namely, that the average temperature of sea water taken during the return voyage from Madeira recorded in our last issue corresponds very closely with the average temperature of the *air* at the same points, and that the observations made entirely confirm the results obtained by him and recorded in his paper. The track of the line of steamers whose logs he used passes from Plymouth quite close to Madeira in order to touch at Teneriffe, and therefore the first four days of each of the voyages out, and the last four days of each of the voyages home, represent respectively journeys to and from Madeira. Mr. Hudson's tables thus give no less than seventy-eight observations, taken at all seasons, of the noon temperature, with the force and direction of the wind encountered on the voyage to Madeira, and *vice versâ*. If we turn to Mr. Hudson's "averages,"[1] we can construct from them the average noon *air* temperature of voyages home from Madeira made by vessels passing that island in the beginning of December, and the result is here appended for comparison with that of the sea water:[2]—

Steamer leaving Madeira for England.	Average noon temperature of sea air.	Average temperature of sea water.
First day out	64° F.	66·0° F.
Second day out	61°	62·0°
Third day out	56°	60·0°
Fourth day out	52°	55·3°

Taking in the same way the average noon air temperature of voyages out to Madeira by the steamers leaving England in December[3] and similarly comparing them with those of the sea water, we obtain the following results:—

Steamer leaving England towards Madeira.	Average noon temperature of sea air.	Average temperature of sea water.
First day out	50° F.	54° F.
Second day out	55°	53°
Third day out	59°	62°
Fourth day out	63°	66°

Turning to individual voyages,[4] it is found that the following were the noon air temperatures for three years encountered by steamers passing Madeira at the end of December on their way home to England:—

—	Voyage 9—Steamer IV. Passed Madeira Dec. 20th, 1889.	Voyage 22—Steamer II.* Passed Madeira Dec. 22nd, 1890.	Voyage 35—Steamer V. Passed Madeira Dec. 20th, 1891.
First day ..	62° F.	65° F. 62°	60° F.
Second day ..	60°	59° 57°	56°
Third day ..	57°	56° 52°	47°
Fourth day ..	57°	49° 45°	45°

* Owing to a defect in the engines this steamer took eight days to get home.

This affords considerable weight to the claims of Madeira to offer to its residents an equable and invigorating sea climate. Indeed, in shape the island is not unlike a huge vessel anchored to Las Desertas, the prow of which is pointed towards the African coast and the stern towards the Atlantic. It possesses all the advantages of an ocean climate—a sea life without the motion of the ship and without the disadvantages of enforced and may be disagreeable companionship. The sea temperature was pointed out last week as varying from 68° to 66° in the latitude of Madeira, and it was further shown that at an elevation of 190 feet the variation was from 66° to 60°, a figure which harmonises with the genial changes of an ocean climate and with Mr. Hudson's remarks. The atmosphere is moist, but probably not more so than that of the favourite summer resorts of the sunny south. This is everywhere evident by the luxuriousness of the vegetation. In point of humidity it is a remarkable fact that the island of Madeira as compared, say, with Teneriffeis as shown by independent data, drier for five months in the year, of equal humidity for two months, and more moist for five months.[5] Comparing the mean temperatures of the two coldest months of the year, we find the temperature in December to be at Madeira 61·6°, at Orotava 61·2°, and in January the same authority places that of Madeira at 64° and of Orotava at 59°.

"Wind, next to moisture and temperature, is the most important point in determining the physiological and thera-

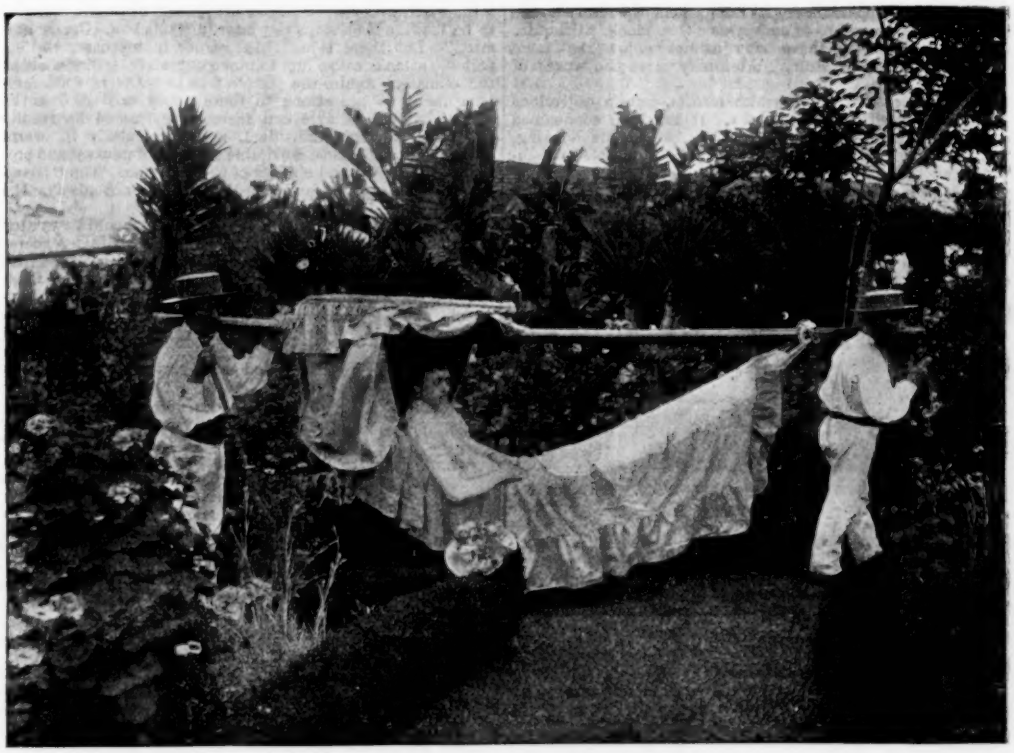
[1] Vide THE LANCET of Oct. 21st, 1893, p. 995: Steamer leaving New Zealand in November.

[2] As some doubt has been cast on the accuracy of the ships' logs, this confirmation of their value may be of interest to our readers.

[3] Vide THE LANCET of Oct. 21st, 1893, p. 995: Mean of two averages of steamers leaving Plymouth in December.

[4] Vide THE LANCET of Oct. 21st, 1893, pp. 983, 988, 992.

[5] Health Resorts of the Canary Islands, by Dr. Cleasby Taylor, p. 80 et seq.



Winter Scene at Madeira, December 11th, 1893. Hammock-bearers carrying lady through the gardens.

peutical character of sea climate."[6] Every practitioner, and indeed every person, knows from his own experience the ordinary effects of the sea-breeze. A look at the clouds in the morning will convince an observer that there are here frequently two currents of the air, and sometimes even three, and it may be even four, affecting them at the same time, and the air is never in danger of becoming stagnant. The north-east trade wind is the most prevalent, but it is a rare occasion to find what may be called a rough and boisterous wind. Dr. Grabham computes that from 340 observations made from November, 1867, to November, 1868, there were found to be 263 days of N.E. wind, 8 of N. wind, 7 of E. wind, and 62 of W. wind. The dry and warm east wind (the *leste*) rarely makes itself felt during the winter and spring months. Dr. Heineken remarks that, as a general law, to which but few exceptions arise, the rains of Madeira are periodical, that they come from the westward of north and south, and that to the eastward of these points of the compass it is all fine open weather. The same

[6] The Practitioner, vol. xix., p. 255.

Winter Scene in England. Wanstead Park, Essex, January 8th, 1894.

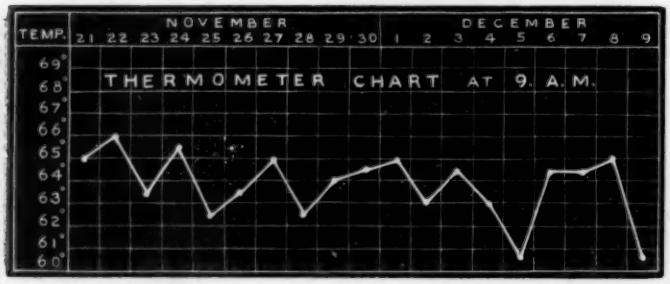
authority has made some very careful records of the barometric conditions. The barometer is highest with a north-east wind and lowest with a south-west wind. The readings taken during a period of six years, and corrected, show the annual mean measure to be 30 in. The daily pressure was for a fortnight in the month of December as shown in the barometer chart. In an article published in this journal,[7] Dr. G. H. Brandt gives an account of Madeira and its climates. His use of the plural is justifiable, for the island, with its varying altitudes, furnishes varieties of climate suitable for individual idiosyncrasies. The facts he records bear out the accuracy of the figures which have already been given. Observing at a height of 370 feet above the level of the sea, he gives the mean barometric pressure as 29·8 inches. Speaking of the climate, he says,[8] describing his personal observations: "For invalids requiring a real change of climate no place can boast of more suitable advantages than Madeira. The unrivalled equability of its temperature, and other almost indispensable necessities, such

[7] THE LANCET June 21st, 1862.
[8] THE LANCET, June 21st, 1862.

as the excellent quality of the food, the comfortable, clean, and home-like appearance of its inhabitants, the total absence of dust, the easy means of conveyance (hammock, palanquin, and easy-chair for those who cannot enjoy the more difficult exercise of riding), admirably meet the wants of the invalid."

As is the case with all health resorts, certain objections have been urged against Madeira. It has been condemned by one authority as too "livery," by another as relaxing. At one time it has been described as unfavourable to rheumatic affections, and a physician has protested that nothing would persuade him to send any of his heart cases there unless he was sure that the patient would not over-exert himself with hill-climbing. All these criticisms are too extreme, and some must fail by reason of their narrowness. The individual and not the disease alone has to be taken into account.

The great point of importance in this or any other mode of climatic treatment is a strict attention to regimen. Dr. Faber remarks on this point: "It is an error, which is as common as it is serious, to believe that the climate they are sent to for their health is to do everything towards their recovery, and they therefore may live as they like under the health-giving sky. But for this reason, many cases under climatic treatment would give a most satisfactory result, and their failure, therefore, must not be imputed to the climate."

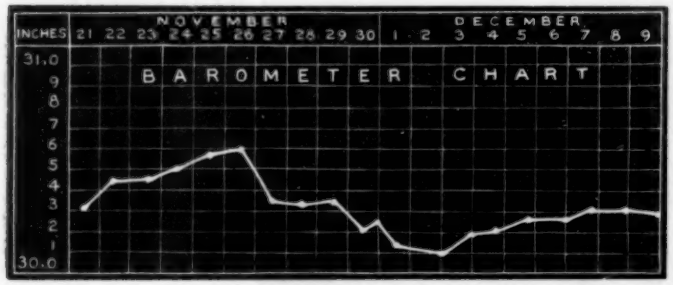


Unfortunately in Madeira very many illustrations of this tendency are to be found among health-seekers. The pitiful tale was too often told of those suffering from reduced vigour either from pulmonary or nervous diseases. On reaching the hotel they are at first too destitute of energy to move much. But the period of "progression" is soon reached, when they begin to feel well. The climate up to that point has done its work of invigoration and renovation. Now commence the late hours, the fatiguing excursions among the hills, and the exposure to chill and dampness, with their unhappy results. Never were truer words uttered than those addressed to us by a lady who has long resided in the island: "During the first three months in Madeira the risks to the patients sent there may be attributed to the change of climate and surroundings, and to the altered mode of life; afterwards the risks are those for which the patient and not the climate must be held responsible." This observation is borne out by Dr. Curnow, who holds the view that, even in cases of incipient phthisis, the further patients are sent from civilisation the better they do, provided they can get proper food, dry air, and sunshine. It is not the place alone, but the regimen also. Visitors to foreign lands attend most closely to the great measures laid down for their guidance, but the small things of life are neglected. Thus a young man suffering from chronic asthma flees to Madeira in order to escape "the wrath to come," which he has learned by past experience to be his fate if he stops to winter in "this land of snow and mist." But there is no strict *régime* in his case, and his periodic attacks cause him to make ungrateful remarks about the climate. Again, the temptations to bathe in a sea temperature of 66° are strong to those newly arrived from the north; but the climate can scarcely be blamed for results which in a weak individual, and particularly in warm climates, are the almost inevitable outcome of unusual and prolonged immersion and chilling of the abdomen. The "island disease" (a violent form of diarrhœa) is not always the product of the island.

The general rule laid down by Dr. Faber should be written up in Madeira in letters of gold. A careless life in a therapeutic sense is incompatible with climatic as with other forms of treatment; and it is under these circumstances that those in search of a renewed lease of health—it may be of life—should exercise chiefly the virtues of patience, self-denial, and the habit of making the best of every occurrence. They should do to the island as they would it should do to them.

There is one noteworthy drawback, and that is that the nature of the island renders locomotion somewhat slow. But even this has proved, time and again, the salvation of many a suffering one whose life had spun too fast amid the busy hum of men. There are no means of rushing from quinta to quinta, or of leaving visiting cards at the rate of so many an hour. On horseback this feat may be attempted, but invalids do not care for such a form of exercise. The horses, too, are well-trained animals in the sense of reserving their energies, and are always accompanied by an attendant. These ponies (see illustration) are capital climbers, and if anyone doubts the effect of the climate in developing "long wind" and chest power let him watch these attendants following the path of the rider throughout a long excursion into the country, only aiding themselves by holding on occasionally to the caudal appendage of the creature.

An invalid lady may be taken to pay a visit with a minimum of fatigue. The illustration (p. 115) represents the mode of travelling adopted by many ladies who cannot ride or who may be too ill to walk. The hammock can be brought into a sick-room, from which the patient may be carried through the gardens, through the town, and even into the sitting-room of the quinta at which she wishes to call. In making journeys up the hillsides, ladies, and even gentlemen who are unable to stand the fatigue of riding, readily avail themselves of this mode of travelling. It is astonishing to note the steadiness and skill with which the "bearers" discharge their portion of the work, and their endurance is a frequent matter of comment among the visitors. Their demeanour and civility are beyond all praise. Nervous ladies need have no fear of accidents or of meeting with any rudeness or incivility; the latter, indeed, may be said to be unknown in the island.



A glance at the illustration of the midwinter scene in the island will lead no one to cavil at the weather there. The fair white dress of the lady, the snowy linen clothes of the "hammock bearers," and the airy hangings of the hammock itself stand out in striking contrast with the white but cold covering of the pathways which mark a feature of the winter scene in England taken during the severe weather of Monday last and depicted on the same page. The lady's flower basket, the box hedgerows, the rose-trees in bloom, and the wealth of verdure forming the background of the picture speak louder on behalf of the climate at this season of the year than can any verbal picture, however glowing. Contrast this with the dark trunks of the stately, but snow-covered and leafless, trees in our representation of Wanstead Park, Essex. They harmonise well with the sombre drapery of the solitary figure looking over the bridge at the skaters on the stream below. The fact is that Madeira has no winter

at all, and hardly any change of season. In the public gardens of the town can be seen in December—

> "Beds of violets blue,
> And fresh-blown roses wash'd in dew."

And, when the summer sun shines too strongly, plenty of grateful shade is at hand in the form of—

> "Arched walks of twilight groves,
> And shadows brown that Sylvan loves
> Of pine or monumental oak"—

through all of which the tempering sea-breeze blows, evidently for the purpose of rendering happier those who have visited these delightful shores.

The effect of prolonged residence in such a climate is everywhere apparent among the visitors, but is probably most perceptible in the hale and hearty, in those who have visited the island for rest and recreation, or whose relatives have been ordered to sojourn in these kindly climes. The beautiful bloom overspreading the cheeks of the English girls, lissom and "graceful as the rosy hours," gave a clinical history of the island more striking to the visitors than any statistical records. It told a tale of good digestion waiting on appetite, and of health on both—of blithe humour, copious exercise, and plenty of occupation of a kind calculated to improve the physique. The island is not destitute of means of affording adequate opportunities for enjoyment, and the residents spare no pains to render the visit happy and pleasurable.

Visitors have still another mode of locomotion in the bullock

The Island Ponies and Attendant Burriqueiros.

car or "carro." Wonderfully safe and easy riding they make, but they do not impress visitors with their speed. A most useful improvement has this year been introduced by Mr. Reid in the shape of a two-horse waggonette which runs at intervals, for the convenience of his guests, between the New Hotel and the centre of the town. This is a praiseworthy addition to the conveyances of the island and is a great boon to visitors, and no doubt success will justify its initiation.

Concerning the cases which do best in this climate and surroundings it may be stated generally that all cases of disease which would do well on a ship without motion, situated in a subtropical climate of great equability of temperature and sheltered from disturbing winds by surrounding heights, will be benefited in Madeira. Catarrhs of all forms never do well with moisture; they do not do well here. Under the influence of moisture the lungs throw off more carbonic acid with less labour. The carbonic acid diffuses through the membranes in

A Madeira "Carro."

a soluble form, resuming the gaseous form again when coming into contact with air. This may help to account for the increase of red blood-corpuscles after a stay at the seaside. The sedative effect of the equable climate suits nervous irritability and some forms of heart disease; the sea-breeze, fresh and unpolluted, favours tissue change. Convalescents from surgical treatment will find this island a haven of rest. Probably it is the El Dorado of the neurotic, the overstrung, the overworked, and the patient whose health has succumbed under stress of business or domestic worries. Dr. Faber thus expresses it: "I believe it is the happy mixture of soothing and stimulating qualities in the sea climate that makes so many people, especially invalids, gain strength and spirits in a most remarkable way under its influence." Both of these qualities will be found in the atmosphere of Madeira.

(To be continued.)

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6117 births and 4567 deaths were registered during the week ending Jan. 6th. The annual rate of mortality in these towns, which had declined from 28·6 to 22·6 per 1000 in the preceding four weeks, rose again to 22·8 last week. In London the rate was 24·5 per 1000, while it averaged 21·6 in the thirty-two provincial towns. The lowest rates in these towns were 11·2 in Halifax, 14·8 in Huddersfield, 15·2 in Leicester, 15·8 in Croydon, and 16·9 in Leeds; the highest rates were 25·8 in West Ham, 26·0 in Liverpool, 26·5 in Burnley, 37·0 in Norwich, and 40·3 in Plymouth. The 4567 deaths in the thirty-three towns included 495 which were referred to the principal zymotic diseases, against 487 in each of the preceding two weeks; of these, 166 resulted from whooping-cough, 102 from measles, 89 from diphtheria, 50 from scarlet fever, 43 from "fever" (principally enteric), 32 from diarrhœa, and 13 from small-pox. No fatal case of any of these diseases occurred last week in Swansea, Newcastle-on-Tyne, or Halifax; in the other towns they caused the lowest death-rates in Huddersfield and Portsmouth, and the highest rates in Gateshead, Salford, Plymouth, and Birkenhead. The greatest mortality from measles occurred in Leicester, Salford, Birkenhead, and Burnley; from whooping-cough in Derby, Gateshead, West Ham, Birkenhead, and Plymouth; and from "fever" in Sunderland. The mortality from scarlet fever showed no marked excess in any of the large towns. The 89 deaths from diphtheria included 56 in London, 4

in Manchester, and 3 in Liverpool. Six fatal cases of small-pox were registered in Birmingham, 3 in Bradford, 2 in London, and 2 in Oldham, but not one in any other of the thirty-three large towns. There were 94 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 6th inst., against 118, 100, and 93 at the end of the preceding three weeks; 15 new cases were admitted during the week, against 23 and 14 in the preceding two weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital, which had been 3102, 2993, and 2988 at the end of the preceding three weeks, was 2855 on Saturday last; 210 new cases were admitted during the week, against 285 and 262 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 841 to 516 in the preceding four weeks, rose again to 566 last week, but were 184 below the corrected average. The causes of 92, or 2·0 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Manchester, Leeds, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, Bolton, Blackburn, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined from 23·0 to 21·8 per 1000 in the preceding three weeks, further fell to 21·5 during the week ending Jan. 6th, and was 1·3 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·4 in Perth, and 15·8 in Greenock, to 24·4 in Paisley and 26·5 in Dundee. The 613 deaths in these towns included 34 which were referred to whooping-cough, 13 to diarrhœa, 12 to diphtheria, 5 to scarlet fever, 5 to "fever," 4 to measles, and 3 to small-pox. In all, 76 deaths resulted from these principal zymotic diseases, against 56 and 63 in the preceding two weeks. These 76 deaths were equal to an annual rate of 2·7 per 1000, which slightly exceeded the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 27 and 29 in the preceding two weeks, further rose to 34 last week, of which 14 occurred in Glasgow, 8 in Edinburgh, and 5 in Dundee. The deaths referred to diphtheria, which had declined from 13 to 8 in the preceding three weeks, rose again to 12 last week, and included 4 in Edinburgh, 3 in Glasgow, 3 in Dundee, and 2 in Leith. The 5 fatal cases of scarlet fever were below those recorded in any recent week. The deaths referred to different forms of "fever," which had been 6 and 4 in the preceding two weeks, were 5 last week, of which 3 occurred in Glasgow. The 3 fatal cases of small-pox were registered in Leith. The deaths referred to diseases of the respiratory organs in these towns, which had been 172 and 155 in the preceding two weeks, further declined to 146 last week and were as many as 71 below the number in the corresponding week of last year. The causes of 52, or more than 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 28·2 to 36·8 per 1000 in the preceding three weeks, declined again to 27·1 during the week ending Saturday, Jan. 6th. During the thirteen weeks of last quarter the rate of mortality in the city averaged 27·4 per 1000, against 23·2 in London and 22·3 in Edinburgh. The 182 deaths in Dublin during the week under notice showed a decline of 65 from the number in the previous week, and included 13 which resulted from the principal zymotic diseases, against 20 in each of the preceding two weeks; of these, 5 were referred to whooping-cough, 3 to measles, 2 to "fever," 2 to diarrhœa, 1 to scarlet fever, and not one either to small-pox or diphtheria. These 13 deaths were equal to an annual rate of 1·9 per 1000, the zymotic death-rate during the same period being 3·2 in London and 2·5 in Edinburgh. The fatal cases of whooping-cough, which had been 6 in each of the preceding two weeks, were 5 last week. The 3 fatal cases of measles corresponded with the number in the preceding week. The deaths referred to different forms of "fever," which had been 10 and 6 in the preceding two weeks, further declined to 2 last week, a lower number than in any week since July last. The 182 deaths registered in Dublin last week included 25 of infants under one year of age and 49 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from those recorded in the preceding week. Six inquest cases and 2 deaths from violence were registered; and 57, or more than a fourth, of the deaths occurred in public institutions. The causes of 18, or nearly 10 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING DECEMBER, 1893.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality during December in each of the forty-one sanitary districts of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases in the accompanying table was equal to 14·0 per 1000 of the population, estimated at 4,305,551 persons in the middle of last year. In the preceding two months the rates had been 24·5 and 20·5 per 1000. Among the various sanitary districts the rates last month were considerably below the average in Westminster, St. James Westminster, Hampstead, St. Martin-in-the-Fields, Strand, Holborn, and St. George Southwark; while they showed the largest excess in St. Pancras, Hackney, Clerkenwell, Bethnal Green, St. George-in-the-East, Limehouse, Poplar, Battersea, and Greenwich. The prevalence of small-pox in London showed a marked decline during December, an average of 20 cases weekly being notified, against 32 during November; of the 80 cases notified during last month, 13 belonged to Kensington, 11 to Paddington, 11 to Greenwich, 8 to Islington, 6 to St. Pancras, 6 to Mile End Old Town, and 6 to Plumstead sanitary districts. The Metropolitan Asylum Hospitals contained 82 small-pox patients at the end of December, against 71, 81, and 128 at the end of the preceding three months; the weekly admissions averaged 20, against 16 and 20 in the preceding two months. The prevalence of scarlet fever in London showed a further marked decline from that recorded in recent months; this disease was proportionally most prevalent in Hackney, Bethnal Green, St. George-in-the-East, Limehouse, Mile End Old Town, Battersea, and Greenwich sanitary districts. The Metropolitan Asylum Hospitals contained 2873 scarlet fever patients at the end of December, against 2659, 2633, and 2755 at the end of the preceding three months; the weekly admissions averaged 275, against 321 and 385 in the preceding two months. Diphtheria also showed decreased prevalence during the month under notice; among the various sanitary districts this disease showed the highest proportional prevalence in Hackney, Bethnal Green, Poplar, St. Saviour Southwark, Newington, Battersea, and Greenwich. There were 283 cases of diphtheria under treatment in the Metropolitan Asylum Hospitals at the end of December, against numbers increasing from 296 to 308 at the end of the preceding three months; the weekly admissions averaged 55, against 64 and 70 in the preceding two months. The prevalence of enteric fever showed a marked decline during last month; among the various sanitary districts this disease was proportionally most prevalent in Hackney, City of London, Bethnal Green, Poplar, and Woolwich. The Metropolitan Asylum Hospitals contained 103 enteric fever patients at the end of December, against 104, 112, and 116 at the end of the preceding three months; the weekly admissions averaged 17, against 17 and 19 in the preceding two months. Erysipelas showed the highest proportional prevalence in Marylebone, Clerkenwell, St. Luke, Poplar, and Battersea sanitary districts. Six cases of puerperal fever were notified in Islington, 5 in Camberwell, 4 in Lambeth, and 4 in Battersea sanitary districts.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various sanitary districts, the deaths occurring in the institutions of London having been distributed among the various sanitary districts in which the patients had previously resided. The distribution of these deaths, especially of those resulting from zymotic diseases, affords the most trustworthy data upon which to calculate reliable rates of mortality. During the four weeks ending Saturday, Dec. 30th, the deaths of 8930 persons belonging to London were registered, equal to an annual rate of 27·0 per 1000, against 18·6 and 23·6 in the preceding two months. The lowest death-rates during December in the various sanitary districts were 19·8 in

MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON.—DECEMBER, 1893.

(Specially compiled for THE LANCET.)

Sanitary areas.	Estimated population in the middle of 1893.	Notified Cases of Infectious Disease.											Deaths from Principal Infectious Diseases.												
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
LONDON	4,305,551	80	2159	1088	—	351	22	45	884	—	4630	14·0	6	177	113	311	267	—	24	2	56	1031	3·1	8930	27·0	198
West Districts.																									
Paddington	120,277	11	41	24	—	6	—	2	18	—	102	11·1	—	8	1	7	3	—	4	—	1	24	2·6	217	23·5	181
Kensington	167,038	13	62	32	—	9	2	—	36	—	154	12·0	3	10	5	10	8	—	3	—	2	41	3·2	355	27·7	243
Hammersmith	103,674	—	39	13	—	9	2	1	15	—	79	9·9	—	2	1	7	4	—	4	2	—	10	2·5	215	27·0	268
Fulham	103,075	—	54	20	—	—	—	3	12	—	99	12·5	—	—	3	12	6	—	3	—	1	25	3·2	179	22·6	184
Chelsea	98,114	2	32	19	—	3	—	—	22	—	78	10·4	—	2	2	3	1	—	2	—	—	10	1·3	203	27·0	150
St. George Hanover-square	75,825	—	26	14	—	7	—	—	7	—	54	9·3	—	1	1	4	2	—	4	—	1	13	2·2	130	22·3	122
Westminster	54,761	—	24	6	—	2	—	1	3	—	36	8·6	—	3	3	1	1	—	1	—	1	10	2·4	120	28·6	221
St. James Westminster	23,873	—	2	4	—	2	—	—	5	—	13	7·1	—	2	—	1	1	—	1	—	—	5	2·7	57	29·2	155
North Districts.																									
Marylebone	139,546	1	54	36	—	10	—	2	42	—	145	13·5	—	8	6	4	5	—	4	—	—	27	2·5	335	31·3	175
Hampstead	73,949	—	24	6	—	5	1	—	5	—	41	7·2	—	—	3	2	—	—	3	—	—	8	1·4	117	20·6	176
St. Pancras	234,025	6	133	49	—	22	—	1	62	—	273	15·2	2	15	6	15	7	—	2	—	3	10	2·8	481	26·8	188
Islington	328,608	8	165	84	—	55	1	6	66	—	365	14·5	—	3	10	31	18	—	9	—	5	76	3·0	647	24·6	188
Hackney	240,177	—	161	90	—	37	1	2	48	—	339	18·4	—	13	9	25	12	—	6	—	4	69	3·7	466	25·3	160
Central Districts.																									
St. Giles	38,511	—	15	3	—	4	—	—	11	—	33	11·2	—	1	1	1	4	—	2	—	—	9	3·0	85	28·8	200
St. Martin-in-the-Fields	13,911	—	3	1	—	2	—	—	1	—	7	6·6	—	—	—	1	—	—	—	—	—	1	0·9	31	29·1	250
Strand	23,508	—	5	6	—	1	—	—	2	—	14	7·8	—	—	—	3	3	—	—	—	—	6	3·3	57	31·6	293
Holborn	32,646	—	6	8	—	4	—	—	5	—	23	9·2	—	3	1	1	2	—	1	—	—	8	3·2	89	35·5	302
Clerkenwell	65,163	—	20	16	—	6	—	—	28	—	70	16·0	—	2	2	4	10	—	1	—	1	20	4·0	165	33·0	229
St. Luke	41,406	—	20	8	—	1	—	—	14	—	43	13·5	—	2	1	4	5	—	—	—	—	12	3·8	89	28·0	110
City of London	35,383	—	15	5	—	5	—	—	10	—	35	12·9	—	3	—	1	1	—	—	—	—	4	1·5	88	32·4	151
East Districts.																									
Shoreditch	123,425	1	55	35	—	3	1	1	28	—	124	13·1	—	11	4	12	14	—	—	—	—	41	4·3	305	32·2	244
Bethnal Green	129,625	—	109	47	—	23	—	—	30	—	209	21·0	—	10	6	9	12	—	5	—	2	44	4·4	287	28·9	172
Whitechapel	75,163	1	29	13	—	1	—	2	13	—	59	10·2	—	5	1	5	7	—	3	—	3	24	4·2	155	26·9	162
St. George-in-the-East	45,182	—	32	14	—	3	—	—	8	—	57	16·4	—	8	—	4	3	—	1	—	1	17	4·9	116	33·5	229
Limehouse	57,386	—	43	10	—	7	1	—	16	—	77	17·5	—	—	—	4	6	—	1	—	—	11	2·5	112	25·4	214
Mile End Old Town	108,006	6	67	30	—	5	—	1	19	—	128	15·5	—	5	3	4	4	—	2	—	2	20	2·4	225	27·2	168
Poplar	168,876	4	93	76	—	33	2	—	49	—	257	19·8	1	5	7	13	14	—	5	—	2	47	3·6	327	25·2	183
South Districts.																									
St. Saviour Southwark	26,823	—	12	9	—	3	—	—	3	—	27	13·1	—	—	2	2	3	—	—	—	—	7	3·4	62	30·1	258
St. George Southwark	59,952	—	19	8	—	1	—	—	12	—	40	8·7	—	3	—	4	13	—	1	—	2	23	5·0	185	40·2	325
Newington	117,430	3	58	38	—	5	—	—	17	—	121	13·4	—	1	5	8	27	—	2	—	1	44	4·9	307	34·1	249
St. Olave Southwark	12,861	—	7	4	—	—	—	—	—	—	11	11·1	—	—	3	2	—	—	—	—	—	5	5·1	27	27·4	163
Bermondsey	84,244	—	29	17	—	5	—	—	15	—	66	10·1	—	1	1	8	18	—	1	—	—	29	4·5	230	35·6	309
Rotherhithe	39,764	1	19	5	—	4	1	—	8	—	38	12·5	—	—	2	1	1	—	2	—	2	8	2·6	50	29·5	229
Lambeth	280,567	1	149	65	—	9	4	4	56	—	288	13·4	—	21	5	21	6	—	4	—	1	58	2·7	585	27·2	177
Battersea	160,633	1	112	68	—	21	1	4	50	—	257	20·9	—	15	2	13	8	—	3	—	2	38	3·1	312	25·3	236
Wandsworth	169,379	—	61	26	—	8	1	2	34	—	142	10·9	—	4	4	7	7	—	1	—	1	24	1·9	257	19·8	187
Camberwell	246,837	—	139	45	—	13	—	5	47	—	249	13·1	—	4	6	21	9	—	2	—	6	48	2·5	487	25·7	247
Greenwich	173,349	11	130	57	—	21	3	4	35	—	261	19·6	—	6	6	16	12	—	4	—	10	54	4·1	330	28·6	178
Lewisham (excluding Penge)	76,593	—	32	22	—	3	—	1	18	—	76	12·9	—	—	—	6	—	—	2	—	1	9	1·5	120	20·4	133
Woolwich	41,794	4	10	6	—	9	1	—	6	—	36	11·2	—	—	3	2	3	—	2	—	1	11	3·4	91	28·4	183
Plumstead	94,192	6	43	29	—	4	—	3	7	—	92	12·7	—	—	3	13	12	—	3	—	—	31	4·3	194	26·9	252
Port of London	—	—	—	—	—	1	—	—	1	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 57 cases of membranous croup

† Including deaths from membranous croup.

Wandsworth, 20·2 in St. James Westminster, 20·4 in Lewisham (excluding Penge), 20·6 in Hampstead, 22·3 in St. George Hanover-square, 22·6 in Fulham, and 23·5 in Paddington; the highest rates were 32·4 in City of London, 33·0 in Clerkenwell, 33·5 in Limehouse, 34·1 in Newington, 35·5 in Holborn, 35·6 in Bermondsey, and 40·2 in St. George Southwark. During the four weeks of December 1031 deaths were referred to the principal zymotic diseases in London; of these, 311 resulted from diphtheria, 267 from whooping-cough, 177 from measles, 118 from scarlet fever, 96 from different forms of "fever" (including 94 from enteric fever and 2 from ill-defined forms of fever), 56 from diarrhœa, and 6 from small-pox. These 1031 deaths were equal to an annual rate of 3·1 per 1000, against 2·7 and 3·0 in the preceding two weeks. Among the various sanitary districts the lowest zymotic death-rates were recorded in Chelsea, St. George Hanover-square, Hampstead, St. Martin-in-the-Fields, City of London, and Lewisham; and the highest rates in Shoreditch, Bethnal Green, St. George-in-the-East, St. George Southwark, Newington, St. Olave Southwark, and Bermondsey. Six fatal cases of small-pox were registered in London during the month under notice, being 10 below the corrected average number in the corresponding periods of the preceding ten years; of these 6 deaths, 3 belonged to Kensington, 2 to St. Pancras, and 1 to Poplar sanitary districts. The 177 deaths referred to measles were 100 below the average number; among the various sanitary districts this disease showed the highest proportional fatality in City of London, Shoreditch, Bethnal Green, St. George-in-the-East, and Battersea. The 118 fatal cases of scarlet fever slightly exceeded the corrected average number; this disease was proportionally most fatal in Westminster, Marylebone, Hampstead, Hackney, Bethnal Green, Newington, and Woolwich sanitary districts. The 311 deaths referred to diphtheria were considerably more than double the corrected average; among the various sanitary districts this disease showed the highest proportional fatality in Fulham, Hackney, Shoreditch, Bermondsey, Greenwich, and Plumstead. The 267 fatal cases of whooping-cough were 51 above the corrected average; this disease was proportionally most fatal in Clerkenwell, St. George Southwark, Newington, Bermondsey, and Plumstead sanitary districts. The 96 deaths referred to different forms of "fever" were 29 above the corrected average; among the various sanitary districts the highest "fever" death-rates were recorded in St. George Hanover-square, Hampstead, Bethnal Green, Whitechapel, and Woolwich. The 56 fatal cases of diarrhœa almost corresponded with the corrected average. In conclusion, it may be stated that the mortality in London during December from these principal zymotic diseases exceeded the average by more than 20 per cent.

Infant mortality in London during the month under notice, measured by the proportion of deaths under one year of age to births registered, was equal to 198 per 1000, and considerably exceeded the average; the lowest rates of infant mortality were recorded in Chelsea, St. George Hanover-square, St. James Westminster, St. Luke, City of London, and Lewisham; the highest rates in Hammersmith, Strand, Holborn, St. Saviour Southwark, St. George Southwark, Bermondsey, and Plumstead sanitary districts.

THE SERVICES.

MOVEMENTS IN THE MEDICAL STAFF.

SURGEON-CAPTAIN ALLPORT has been posted to the Thames District on his return from service in India, and Surgeon-Captain Fayrer to Edinburgh. Brigade-Surgeon-Lieutenant-Colonel Douglas, V.C., retired pay, has been appointed to the Medical Charge of Berwick-on-Tweed. Surgeon-Captain Moir has embarked for a tour of duty at Halifax, and Surgeon-Major Asbury has reported his arrival at Woolwich for duty. Surgeon-Captain Burke has arrived at Sierra Leone. The following officers have resumed duty on return from leave of absence: Surgeon-Captain Dean and Surgeon-Lieutenant Morphew, Aldershot; Surgeon-Major MacNeece and Surgeon-Lieutenant Porter, North-Eastern District.

ARMY MEDICAL STAFF.

The following officers become liable to retirement during the year 1894: Surgeon-Major-Generals W. Collis (April 14th), P. B. Smith (July 18), A. F. Bradshaw (Dec. 5th), Surgeon-Colonel C. H. Giraud (Nov. 30th), Brigade-Surgeon-Lieutenant-Colonel W. H. B. Clapp, M.D. (Dec. 16th), and Surgeon-Lieutenant-Colonel H. F. Hensman (Oct. 25th).

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced: 13th Bengal Lancers: Surgeon-Lieutenant G. M. C. Smith, to the Officiating Medical Charge of the Regiment, vice Surgeon-Major W. Conry. 17th Bengal Cavalry: Surgeon-Lieutenant J. N. Macleod, to the Officiating Medical Charge of the Regiment, vice Surgeon-Captain D. G. Marshall. 19th Punjab Infantry: Surgeon-Lieutenant E. R. Parry, to the Officiating Medical Charge of the Regiment, vice Surgeon-Captain W. H. Gray. Surgeon-Major C. P. Lukis, Civil Surgeon, Naini Tal, to the Medical Charge of the Camp of H. H. the Lieutenant-Governor and Chief Commissioner, North-West Provinces. Surgeon-Major J. Lewtas, to act as Civil Surgeon of Chittagong. Surgeon-Lieutenant E. H. Sharman is placed on the strength of the Madras Establishment. Surgeon-Captain S. E. Prall and Surgeon-Major A. F. Ferguson respectively delivered over and received Charge of the Shikarpoor District Gaol on Dec. 3rd, 1893. Surgeon-Major W. H. Cadge, Civil Surgeon, is transferred from Fyzabad to Naini Tal. Surgeon-Lieutenant-Colonel B. O'Brien, Civil Surgeon, is transferred from Kheri to Fyzabad. Surgeon-Major Fenn, recently attached to the Kabul Mission, has resumed charge of his post of Surgeon to the Viceroy, Surgeon-Major Coates reverting to the Civil Surgency of Lahore. Surgeon-Colonel A. A. Gore, Medical Staff, is under orders for duty in India, in relief of Surgeon-Colonel J. Davis, who is directed to return to England, having completed a tour of service. Surgeon-Colonel C. P. Costello, I.M.C., Principal Medical Officer and Sanitary Commissioner, Assam, retires from the Service.

NAVAL MEDICAL SERVICES.

Inspector-General of Hospitals and Fleets Edward Townsend Mortimer is placed on the Retired List. Staff-Surgeon Francis Reginald Malcolm Loftie is promoted to the rank of Fleet-Surgeon.

The following appointments are notified: Fleet-Surgeons: John Wilson, to Yarmouth Hospital; and James L. Sweetnam, to the *Rodney*. Staff-Surgeons: John Acheson, M.D., to the *Spartan*; Alfred H. Miller, to the *Edinburgh*; and William M. Lory, to the *Æolus*. Surgeons: Edward Cooper, to the *Skipjack*; Harold R. Osborne, to the *Fearless*; Charles J. Fyffe, M.B., to the *Raleigh*; Henry E. Tomlinson, to the *Edinburgh*; and Arthur E. Kelsey, to the *Hearty*.

VOLUNTEER CORPS.

Artillery: 1st Lanarkshire: Surgeon-Major J. S. Cumming, M.D., to be Surgeon-Lieutenant-Colonel.—*Rifle:* 4th (Cambridge University) Volunteer Battalion, the Suffolk Regiment: Lewis Erle Shore, M.D., to be Surgeon-Lieutenant.

VOLUNTEER MEDICAL STAFF CORPS.

The Maidstone Company: Surgeon-Lieutenant-Colonel D. H. Monckton, M.D., resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the corps on his retirement.

THE NAVAL MEDICAL SUPPLEMENTAL FUND.

The directors of the Naval Medical Supplemental Fund, at their quarterly meeting held on Jan. 9th, 1894, Inspector-General F. W. Davis in the chair, distributed the sum of £73 among the several applicants.

INDIAN ARMY ORGANISATION.

The Indian army reorganisation is a very comprehensive and important measure which will presumably soon come into effect and practical application. The scheme, which has now received the sanction of Parliament, has long been under consideration in India and has been advocated by successive viceroys and commanders-in-chief of that country. Its object, according to our reading, is to divide the army into four commands and strengthen more especially that portion of it in the direction from which attack is most likely to occur, and the army of India as a whole will, on the one hand, be unified under the commander-in-chief and headquarter's staff, and, on the other, be decentralised by giving independence as regards all detail to the generals and staff of each of the respective armies making up the garrison of India. It would also appear to be a principal aim of the scheme to facilitate the coöperation and combined action of the different armies in case of war. We have nothing to do, however, with political or strategical considerations; all that concerns us is in connexion with the effect which the scheme will have on the medical services.

It seems to us that the tendency of the reorganisation, on the whole, will be to simplify the working and increase the efficiency of all departments, including the medical, as part of the military machine. The principal medical officer of Her Majesty's forces in India will be at the head of the military medical services and in direct connexion with the supreme government, as he has long been in name if not in fact. According to recent articles in the *Pioneer Mail* on the proposed Indian army reorganisation the medical department will be reconstituted as follows:—"One surgeon-general of Her Majesty's forces at army headquarters with secretary; four surgeons-general of armies, each with a secretary; fourteen deputy-surgeons-general on the administrative staff of districts and four brigade-surgeons surplus to present establishment; total, twenty-eight against twenty-nine." As regards patronage for the higher military appointments it will be shared, as at present, by the Home and Indian authorities.

EXAMINATIONS OF ARMY CANDIDATES.

The *Globe* of the 10th inst. published some remarks on the above subject with which we imagine not a few medical officers will agree. After some observations on the great value and practical utility of a knowledge of colloquial French and German to officers, *epropos* of the low marks allotted to this subject at these examinations, our contemporary urges as of even greater importance the application of physical tests to army candidates. The question that confronts us at the present time is whether our examination scheme provides us with the best possible officers for the army. The possession of a strong physique and proved aptitude for bodily exercise would appear to be among the more essential qualifications for that calling. A fair education is, in any case, indispensable; but the question is whether we are not by our competitive system of examination attracting an undue proportion of book-workers into the army. Our contemporary evidently thinks we are, and that we do not give sufficient attention to the physical qualifications of army candidates.

THE LATE SURGEON-COLONEL A. H. HILSON, M.D. EDIN., C.I.E.

We much regret to record the death of a distinguished member of the Indian Medical Service. Surgeon-Colonel Hilson joined the service in 1857. He served with distinction during the Indian Mutiny, and was Inspector-General of Civil Hospitals, Bengal, during the latter part of his career. During the Mutiny Campaign he was present at engagements at Sohunpore, Phoolpore, Belwa, Amora, and Judgespore, where he was severely wounded. He also served in the Bhootan Expedition of 1865, and on his retirement from the service received a reward for distinguished service.

Our contemporary, the *Broad Arrow*, says: It is rumoured that the appointment of Secretary to the Principal Medical Officer in India, at Simla, held at present by Surgeon-Lieutenant-Colonel Exham, A.M.S., is to be abolished, the second secretary, an Indian medical officer for native troops, taking over the dual duties.

In THE LANCET of Jan. 6th we notified the appointment of Surgeon-Colonel Walsh as Principal Medical Officer in Madras. This will involve the immediate return home of Surgeon-Colonel Davis, who can fulfil so short a period of service on promotion that he was, we presume, considered ineligible for the post.

An examination for eligible surgeons desirous of qualifying for the rank of staff-surgeon in the Navy will be held at Haslar Hospital on Jan. 17th.

MEDICAL MAGISTRATES.—The Lord Chancellor has, on the recommendation of the Lord-Lieutenant, placed the name of William Job Collins, M.D. Lond., L.C.C., upon the Commission of the Peace for the county of London.—Mr. Francis Clowes, M.R.C.S. Eng., L.S.A., of Stalham, Norfolk, has been placed on the Commission of the Peace for the county of Norfolk.

THE COUNTESS OF DUFFERIN'S FUND.—The fifth annual report of the United Kingdom branch of this fund, the objects held in view by the promoters of which are well-known to our readers, is not of so roseate a character as might have been wished. The financial statement shows that the present subscriptions are insufficient to meet the current expenses. It would appear that an income of at least £1000 a year is required to carry on the work designed to be accomplished, whereas the funds at present available amount to only £215.

Correspondence.

"Audi alteram partem."

"THE ETHICAL POSITION OF THE MEDICAL PROFESSION."

To the Editors of THE LANCET.

SIRS,—I would crave your indulgence, your attention, and a little of your space. Recently there has been a good deal appearing in the columns of THE LANCET with reference to suggested improvements in the medical curriculum, overcrowding of the profession, and allied subjects. Your last pronouncement[1] has reference to the recent Harveian oration delivered by Dr. Pye-Smith at the Royal College of Physicians of London. In that article there is much that is admirable on "professional etiquette," but I desire to refer more particularly to your second paragraph in it, where you say that there are two or three ways in which the leaders of the medical profession and the Fellows of the Royal Colleges can greatly help to uphold the standard of professional conduct. Well, I am neither one of the "leaders" nor one of the "Fellows," but I have thought much on these subjects, and perhaps I may have something to say that may prove of practical utility towards settling a question. On this matter I have had a definite thought for a long time, and the nearest approach to it I have seen in your columns or elsewhere is in the second sentence of that second paragraph. You say "the first and by far the most important" way to uphold the standard of professional conduct is by "raising still higher the standard of preliminary education in those applying to be registered as medical students"; but even this is indefinite. To be practical we must be definite. Let me reduce your abstract statement to a concrete form and say, "Let it be compulsory that all 'those applying to be registered as medical students' shall first hold the degree of B.A. or M.A."

The medical profession, in my opinion, will never be right until in this respect it is placed on a similar footing to the legal. No man can simply apply to be registered as a law student—he must first be a B.A.; and in this way a higher and more uniform standard of excellence is at once secured in that profession. The "weeds" are cut off at a stroke. True, the strainer may not be fine enough in its mesh to keep out all coarse material, but only a very small proportion can pass through. This sifting process of course applies only to the intellectual, not to moral, characteristics; hence the expression, "There are black sheep in every flock." I remember one of my medical professors used to be known amongst us students as one who rather sneered at M.A.'s who began their study of medicine in his particular branch, but we used to think in return (and perhaps with our younger conceit) that it was a case of "sour grapes" with him; but, all the same, the M.A.'s, with few exceptions, succeeded in taking the highest places during their curriculum, and my experience of some fifteen years' practice shows me that as a rule they keep their high places afterwards in the actual battle of life. As things are, there is no question in my mind that there are many men in the medical profession who would be better out of it. It would be (or would have been) better for them and it would be better for their patients. They have mistaken their calling. The advantages that would accrue from such a compulsory sifting would be incalculable. The overcrowding (which is so much complained of) would be done away with in the first place. That in itself brings immediate benefit to all concerned. The patients get a superior class of men to attend them; the medical men themselves, being *a priori* men of higher culture and breeding, are less likely to have a life of worry caused by friction (from jealousy and kindred reasons) with their professional brethren, and they receive better pecuniary remuneration for their work.

Another enormous advantage of having this superior class of men would be that in the course of time the whole medical profession would be placed on the higher standing in the eye of the public which is its rightful position. In your leading article on the funeral service over the mortal remains of the late Sir Andrew Clark, in the same number of THE LANCET, you refer to this very point in saying, "it is a sign of the times that the man of science is beginning to bulk

[1] THE LANCET, Nov. 18th, 1893.

more largely in the public eye"; and from this you naturally conclude that "if the nation thus does honour to the healer dead, it needs must follow that the healer living and working should be equally entitled to the respect and confidence of his fellow citizens." Of course it should follow; and the public itself should be the first to recognise merit and to acknowledge that the class of men forming the medical profession were really worthy of and entitled to respect and confidence. Unfortunately, in some parts of the world the tendency of the population as a whole is to regard a medical practitioner and a shopkeeper as on a level. It is not for me to say why this is so—whether it is owing to any peculiar matter-of-fact way the people have of looking at things or to the fact that the medical men they have in their midst are not men to win their respect and confidence. Each may, perhaps, be a factor, although I am inclined to think, judging from my own experience, that the latter is the true *fons et origo mali*. Now, if anything could be done to rectify this state of matters it would be such a plan as I have ventured to suggest. We secure at once a better class of men as medical practitioners, we gain the respect to which we are fairly entitled, but which the public has hitherto withheld, we benefit our patients by our greater skill in our art, and we benefit ourselves by lessening competition and friction (an immense gain). In concluding your leading article on Dr. Pye-Smith's oration you say that "the sister profession of the law has set us a good example" in enforcing the great morals of its practice and increasing that concord of the legal profession which is so essential to its prosperity and its honour. I have ventured to suggest that it sets us a good example also in its rules for the admission of its intending students. Until such a rule, however, is passed by those in authority in matters medical it is strictly incumbent on the Royal Colleges to use that disciplinary control on the exercise of which their privileges and their monopolies were originally made contingent—a control which you are careful to indicate has been allowed to fall into desuetude. How, again, on this point is it with the legal profession? What machinery can the legal authorities not call into instant action if necessity arises? What man of them all is safe if he commits an unprofessional act? Can his name not be immediately struck off the roll? Hence, even if for no higher motive, a member of the legal profession has to be exceedingly careful to do that which is right, not merely in his own eyes, but in the eyes of all in his profession. In medicine there is no such safeguard, or, if there is, it is surely in abeyance; but my main object in this communication, as I have said, is to call attention to a definite plan having reference to the time before a man enters the medical profession, and it seems to me, judging from the tenour of public prints, that my idea is to the point and also timely. If it should meet your views and find its way into your columns, or you should think anything is to be made of the idea, it will be a great satisfaction to me to know that I have been the means of raising and upholding the status of the medical profession, and thereby benefiting it and the public alike. I am, Sirs, yours truly,

GEORGE A. LEGGE, M.A., M.D., C.M.

Somerset East, Cape of Good Hope, Dec. 11th, 1893.

*** Our correspondent is surely in error as to the entrance of a student into the legal profession.—ED. L.

"EXCISION OF GUMMATA OF THE TESTICLE."

To the Editors of THE LANCET.

SIRS,—With regard to the editorial comments upon a case of excision of a tumour from the testicle, published in THE LANCET, Nov. 4th, if the description had been less abbreviated the necessity for the operation would have been apparent, for the two tumours dissected out of the body of the testicle were both full of pultaceous semi-fluid material. Perhaps the word "gumma" in this connexion is more open to doubt—I can only say that the age and history of the patient pointed that way; while the naked-eye characteristics were more those of softened subcutaneous gummata than of tuberculous cysts, of which I have had a large surgical experience in other parts of the body, though not in the testicles. But the special object in sending the case referred to was to show the ease with which the tumours were excised, leaving a healthy organ. Much has been written of late about conservative surgery of the ovary; I am under the impression that many castrations are performed for simple neoplasms of the testicle, which might be dissected out as in the case I recorded.

I am, Sirs, yours truly,

Mission Hospital, Kashmir, Dec. 12th, 1893. ARTHUR NEVE.

"CHLOROFORM IN NASAL GROWTHS."

To the Editors of THE LANCET.

SIRS,—Dr. Holloway, in his note in the last issue of THE LANCET on Chloroform in Nasal Growths, surely rather limits himself to one set of operators, for most certainly if he took a wider range he would find surgeons who take a much longer time than he allows. My experience as to the time for these operations is from thirty seconds to thirty minutes (half an hour). The shorter cases can be done easily with gasalene or continued with a whiff of ether as in slightly prolonged dental operations; the longer cases cannot be done with gas alone. If this be so—and as regards the length of time for the operation the surgeon can alone be responsible, and must be the best judge—what are we to administer to effectively anæsthetise the patient? My fairly large experience is that ether, with the preliminary gas, should be given to the full anæsthetisation of the patient; then, by an ordinary Junker, with two or three drachms of chloroform, we can continue the anæsthesia for any length of time required by blowing into the mouth. I dare say this proceeding looks a little complicated, if not fussy; but we have alone to consider the safety of our patient and must disregard anything that an onlooker may think. For myself I have not seen any untoward symptoms result from this method; but I am most emphatic on the need of commencing with gas and ether. All operations about the nose and pharynx are of the gravest nature, chiefly from the possibility of asphyxiation from hæmorrhage, and no one can undertake them with a light heart.

I cannot help thinking that in some of the cases reported as "misadventure from chloroform" the death is not always due to the anæsthetic; but unfortunately they appear as such in the lay journals, and hence it behoves us to have them fully reported in our own journals that they may be thoroughly and professionally discussed. This surely is the great value of our new Society of Anæsthetists, where we can all fully report, in the most open manner, our failures and successes. I am, Sirs, yours truly,

Queen Anne-street, Jan. 8th, 1894. GEO. H. BAILEY.

"THE DETERMINATION OF SEX."

To the Editors of THE LANCET.

SIRS,—This subject, again opened up by Mr. Andrew Wilson in your issue of Dec. 30th, 1893, is one of the greatest interest and importance; and while his facts may be accepted, his theory, built upon them, requires careful investigation and discussion. I think there is no doubt now as to the general acceptance of the truth of the facts as laid down by Mr. Wilson, corroborated as they are by the strong array of cases that he has adduced. Similar results are seen to follow in the lower animals (mammalia), as dogs, cattle &c., where it is found that if impregnation takes place immediately after the cessation of the "heat" (which corresponds to the human menstruation) the resulting offspring are more likely to be females than if the impregnation is delayed for some days. The interval of menstruation being shorter in the human mammal than in many of the others may stand in relation to a more rapid maturation of the ovum and, therefore, to a shorter time wherein the process that leads to a determination of sex is carried out. And now as to Mr. Wilson's theory. Unfortunately we have to construct a theory partly on supposition, for one of the chief factors is missing—i.e., we do not know the time of the extrusion of the ovum from the ovary (ovulation) in relation to menstruation. I must here quote a few sentences from Mr. Wilson's paper for the sake of reference. "I hold still that the ovum which is fertilised pre-menstrually, being a stronger and more vital one, tends towards the male side, and that the ovum which is fertilised post-menstrually, *having lost much of its vitality* [the italics are mine], gets a bias towards the female side. Therefore, it needs a more vigorous ovum in the quadruped [? mammal] to develop into a male than is required for a female conception. What I maintain is that, given fertilisation, it is a question of *vitality* and *nutrition* on

the part of the ovum which decides the sex of the resulting embryo. ..... The embryo pursues for a time a straight path, then deviates to the male or female side." What determines its deviation? Which is the straighter path? I do not agree with Mr. Wilson that "the impetus to this deviation is given at the commencement of its existence as a fertilised ovum": it is further back. "The longer fertilisation is delayed after its extrusion from the ovary the greater likelihood is there of the ovum developing into a female embryo, and *vice versâ*." It is this theory, built upon the devitalisation of the ovum through menstruation, that I wish to combat.

Premising that Mr. Wilson's facts are true, which have been corroborated by other observers, that conception following very soon after menstruation results in a female embryo, and premising that the ovum comes fresh from the ovary soon after the cessation of the period, its then condition is that of early development—i.e., of quasi-immature growth—and if then fertilised it produces a female embryo, which, for want of a better expression, is of a lower type of development; but after a time it attains a more mature stage, when its fertilisation results in the evolution of the higher type—i.e., the male. Following the same line of reasoning, how is it we so often see that girls are more impressed with the father's features and characteristics, and the boys with those of the mother? Is it not that the dominant energy of the father impresses the immature ovum and outweighs it, so to speak, in the balance of power, but in the case of the male embryo the result is obtained by the same paternal energy working on an ovum of a higher evolution—an ovum that has had more time of intra-maternal growth and so bears a greater proportion of maternal characteristics? I take it, therefore, it is not that menstruation weakens an ovum originally strong, and so "having lost much of its vitality," but that towards the end of the inter-menstrual period the ovum has gained in vitality, or rather has by evolution attained a more mature or higher grade. Before, however, we can formulate a theory that will carry conviction we must increase our knowledge as to the actual time in the menstrual cycle when ovulation takes place.

I am, Sirs, yours faithfully,

Harley-street, Jan. 2nd, 1894. HEYWOOD SMITH.

"LEPROSY AND HEREDITY."

To the Editors of THE LANCET.

SIRS,—Dr. de Valencé, in the letter which he has sent to you touching the matter of the lepers who are sent to India from Mauritius, does not dispute the accuracy of his own statement that these lepers are, as far as medical men can judge, healthy men when they arrive in the Mauritius, and that no inconsiderable number of them leave that colony and return to their homes in India incurable lepers. This they do at the expense and with the cheerful assent of the Government of Mauritius and so return to India to help to infect healthy people there with leprosy. Dr. de Valencé's beliefs and theories about "leprosy and heredity" do not alter the facts of the case. The people who believe in the hereditary transmission of leprosy, in the sense in which Dr. de Valencé believes in it, are so very few in number among those whose opinions on the subject are of any importance that it is unnecessary to deal with the matter.

I am, Sirs, yours truly,

THE WRITER OF YOUR NOTICE OF THE REPORT OF THE ST. LAZARE LEPER ASYLUM.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Hydrophobia at Wavertree.

MUCH alarm was created at Wavertree, an eastern suburb of this city, by a report that on the 2nd inst. several persons had been bitten by a rabid dog. Four boys were playing in Victoria Park when the dog furiously attacked them, biting three on the leg, one on the arm, and also biting a domestic servant on the leg, as well as tearing her clothes. The injured persons were all attended by Dr. Wearing, of Wavertree, and have since been sent to Paris for treatment, one of the boys being sent by his father and the others by a fund raised by the local residents. The dog was destroyed by its owner, and on a post-mortem examination being made by Dr. Barron of Liverpool and Mr. Welsh, the veterinary surgeon of the district, it was found to be the subject of rabies The same dog also attacked Dr. Harvey of Wavertree, but fortunately the bite of the animal did not penetrate his clothes. A hurried meeting of the magistrates was convened on Saturday, and a muzzling order for the whole district of West Derby was issued.

The Confinement of Inebriates.

A melancholy instance of the necessity for the more effectual dealing with confirmed inebriates was disclosed at the city coroner's court on the 6th inst. The deceased, a married woman, had for years been so addicted to drink that she would pawn the furniture of the house bit by bit, as well as her husband's and her own clothing. She actually died in a drunken state. Her husband, himself a sober man, gave evidence, and said that he had done his best to restrain her.

Hospital Sunday in Liverpool.

The second Sunday in the new year (Jan. 14th) will be the twenty-fourth anniversary of the observance of this institution in Liverpool, and, in accordance with their custom, the committee have published their annual report in pamphlet form, with many interesting details both of the Hospital Sunday and Saturday Funds. When the movement was begun in Liverpool it had been a "hardy annual" in Birmingham for about twelve years. It had begun in Carlisle, Manchester, and a few other places, but was unknown in London until some years later. It may be fearlessly asserted that any difficulties which have been overcome in other towns and cities, or which have yet to be overcome, could not be more insidious or formidable than those which had to be encountered in Liverpool. But the perseverance of a few of its citizens, aided by THE LANCET and the local press, overcame all obstacles after two years' hard work, and the first Hospital Sunday collection took place on Jan. 8th, 1871. Its promoters had calculated upon obtaining a total of £4000, and the amount actually realised was £4685. It was, however, felt that it was only an earnest of what might be done, and that future years would see a considerable advance. For the next three years the collections rose to £6823, £8124, and £8848 respectively. In the year 1875, however, the sum fell to £7462, and fluctuated till 1879, when it dropped to £6953. Again, there was a rise in 1880 to £7558 and fluctuations occurred until in 1892 and 1893 the amounts were £6410 and £6211. In 1893 the weather on Hospital Sunday was very inclement, the streets being full of frozen snow and the cold most intense. Still, such a sum as £6211 is one which could not have been raised under such circumstances for any other objects save hospitals and other medical charities, to which it furnished a considerable proportion of their annual income; and therefore, although it was proposed to change the date, the committee judged it better to trust bravely to the future. It only remains to be added that the expenses of collection have always been extremely moderate, amounting yearly to less than 3 per cent. The committee, though comprising clergy and laity of all religious denominations, have worked together most harmoniously and their distributions to the various charities have given general satisfaction. It is confidently expected that with improved times the upward tendency will again be seen.

Jan. 9th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Wintry Weather.

AFTER an unusually mild and open Christmas and New Year, severe weather set in about the middle of last week, and continued without intermission until yesterday evening, when a decided and welcome thaw suddenly took place. A large anti-cyclone has hovered over the neighbourhood of Manchester during the entire period that has elapsed since my last letter. The weather in Manchester has accordingly been misty, and at times dense fogs have overspread the city. From the middle of last week the air-temperature fell rapidly and steadily, until on Saturday night the terrestrial radiation thermometer indicated twenty degrees of frost on the grass. This was at the City Meteorological Observatory in Oldham-road, but reports say that temperatures not much above these were recorded in certain country

districts near Manchester. Although there was but little precipitation last week, there were nevertheless frequent showers of snow and sleet, which, accompanied as they were by bitter easterly winds of some force, often partook of the character of a "blizzard." Although the cold weather, whilst it lasted, caused evident distress in our poorer quarters, it is to be hoped that with a fairly plentiful supply of fuel no great loss of life will result. As yet it is, of course, too early to form an estimate of the increase in the death-rate from pulmonary diseases which is almost certain to accrue from the recent extreme depression of temperature, for the deaths thus caused will not be registered until another week or fortnight has elapsed. It is satisfactory, however, to note that according to the official returns the mortality from influenza is still decreasing in spite of the recent severe weather. The canal traffic in the neighbourhood of Manchester has been entirely disorganised by the frost. The water everywhere has been covered with ice several inches thick, and up to yesterday the ice-boats have in vain endeavoured to make a way for the ordinary craft to pass. There are, of course, the usual crop of ice accidents to record, for skating has been general from Thursday last, and our Lancashire youth are very venturesome.

Small-pox.

This loathsome disease still continues to linger, if not to spread, in many of the large manufacturing towns which are in daily communication with Manchester. In spite of the experience which has been purchased at the cost of so much loss of life both here and elsewhere, vaccination and revaccination are still neglected, and it is doubtful whether anything short of a frightful epidemic will bring people to their senses. In Oldham the disease has been prevalent for a considerable time, but it is in the Yorkshire towns more especially that the disease seems to have effected a lodgment. In view of the fact that the anti-vaccinationists are still at work with unabated energy, it is much to be regretted that the Royal Commission on Vaccination cannot yet see their way to publish the report which has been so long and so anxiously looked for, and which will, it is to be hoped, do something in the direction of settling this much-vexed question.

Jan. 9th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Christmas at the Hospitals.

THE usual exhibitions of benevolence and charity have this year shown no diminution at the various institutions in the city. The General and the Queen's Hospitals have been decorated with taste and much attention, and the fare for the patients made appropriate to the festive season. For the young ones, Christmas trees have borne a variety of pleasing presents which have gladdened the hearts of the juvenile recipients. Father Christmas visited the Children's Hospital in person, and made useful and cheering gifts to the sixty-nine in-patients. The presence of numerous willing workers and visitors rendered the extra duties of the season lighter to the resident staff than they would otherwise have been and divided the honours of the different occasions.

Sanitation versus Infectious Disease.

This was the title of the last of the series of public health lectures given at Mason College, and the question was ably dealt with by Dr. Bostock Hill before a large and appreciative audience. The necessity of accurate disinfection and the importance of inspection were fully dwelt upon. At the present time there are 197 small-pox patients in the City Hospital; information on the above subject is therefore useful and much needed. The diffusion of knowledge on sanitary matters cannot be too strongly enforced in the midst of a closely packed and teeming population. Perhaps no subject is surrounded with more individual selfishness than sanitation, both of the individual and the community.

Periodical Collection for Local Charities.

At a recent meeting of the Hospital Sunday Committee it was stated that the collections made on Sunday, Oct. 29th, in 261 churches, chapels, and other places of worship, amounted to £4499 4*s.* 2*d.* After deducting expenses the balance was £4246 11*s.* 7*d.* The usual votes of thanks were passed.

Jan. 3rd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Edinburgh Royal Infirmary.

THE annual meeting of the contributors to the Edinburgh Royal Infirmary was held last week. Lord Provost Russell presided. The annual report of the managers was submitted. The number of patients remaining in hospital on Oct. 1st, 1892, was 561; the patients admitted during the succeeding year was 8863, making a total of 9424; of this number 617 had died. Of the cases brought to a termination, 3930 were medical and 4831 surgical. The average daily number of patients in the hospital was 690, the greatest number at any one date being 734. The average time the patients remained under treatment was 28·4 days. In the various waiting-rooms about 25,000 patients had been treated. The ordinary income was £30,769 5*s.* 3*d.*, being a slight increase over the preceding year, and there was a decrease of over £400 in the revenue from investments. The income from the sale of hospital tickets had increased by £592 18*s.* The fees paid for training nurses had fallen off. For the first time the three northern counties of England had contributed a sum of £78 9*s.* 6*d.* to the funds of the infirmary, this being the result of a special appeal. It was reported that the house committee had gone thoroughly into the question of the increase in the annual expenditure, but could not fix upon anything that warranted complaint; they considered that it might be advantageous to call the attention of the heads of departments to the increased expenditure, and request their coöperation in maintaining economy with efficiency. The ordinary expenditure for the past year had risen to £43,931 17*s.* 6*d.*, an increase of £1961 18*s.* 1*d.* on the previous year, which was more than explained by the increase in the daily number of patients in hospital, the number being 690 against 652 in the preceding year. The cost of maintenance per occupied bed was 10*s.* 0½*d.* less. The annual cost of each bed during the year was £63 13*s.* 4½*d.* During the year £14,618 4*s.* 2*d.* had been received in legacies and donations of £100 and upwards. The new Home for Nurses had been completed and had been occupied with the happiest results. Reference was then made to the difficulty the managers had to face in providing the necessary beds for the female students, and the arrangements that had been made were detailed. Mention was also made of the proposal to enlarge the hospital, and it was pointed out that action in this matter had been delayed owing to the amount of Scottish money indefinitely locked up owing to the banking crisis in Australia, but that as soon as a favourable opportunity occurred steps would be taken to lay the scheme before the public. Reference was also made to the extension of the Convalescent House. The average daily number of patients there had been 77·6. The report was adopted, on the motion of the Lord Provost.

Glasgow.

According to the report of the medical officers of health there has been a decrease of 30 in the number of cases of infectious disease in the various districts of Glasgow. On Friday last 861 cases were reported, whereas on the previous Friday the number amounted to 890. The number of cases recorded as being in hospital was 631, and the number at home 230.

Jan. 9th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Allegations against Dublin Hospitals.

IN reference to the censure of Sir Patrick Dun's and Mercer's Hospitals by the coroner's jury, as noted in last week's issue of THE LANCET, a special meeting of the governors of Sir Patrick Dun's Hospital was held recently to investigate the matter. The governors adopted a resolution that no charge of neglect had been substantiated against any official of the hospital. According to the long-established rule of the house, all emergency and accident cases are detained until the patients are able to return home; but this rule is subject to the discretion necessarily vested in the visiting surgeon for the time on duty. On the evening in question the house surgeon, being of opinion that the case was one requiring to be detained in the house, said to Dr. Brooks, one of the surgeons and whom the house surgeon believed to be on duty, "I suppose we

should detain this woman." Dr. Brooks did not hear this question, but thinking at the time only of the state of intoxication under which alone the woman appeared to suffer, said "the woman would be all right," and these words were accepted under a misapprehension by the house surgeon as a direction which he was bound to obey. There was, however, no excuse for the house surgeon of Mercer's Hospital to refuse to admit the woman on a point of etiquette that she had been treated in another hospital. The governors of the institution have passed the following resolution in reference to the matter: "That, having read with deep regret the evidence given at the coroner's inquest to the effect that our resident surgeon had declined to admit Mrs. Lyons when brought to this hospital on the night of the 23rd ult. on the grounds that she had been brought from Sir Patrick Dun's Hospital, where she had been properly treated and not detained, we hereby record our condemnation of any such system of medical or surgical etiquette existing, as alleged by our house surgeon, and which, in our opinion, is calculated to endanger life, and we hereby order that in future no such system shall be acted upon in this hospital."

Death of Mr. John W. Boyd, M.R.C.S., L.R.C.P.I., of New Ross.

On Saturday evening Mr. Boyd, the oldest medical practitioner in New Ross, county Wexford, had to see a patient about seven miles from the town. When about to return home he suddenly became unconscious, and, medical aid having been obtained, life was found to be extinct. The deceased practised in New Ross for fifty-six years. Mr. Boyd was medical officer of Old Ross Dispensary for forty years, physician to the Fever Hospital, New Ross, &c. Considerable sympathy has been manifested throughout the entire district for his bereaved family.

Surgeon-Major Lloyd, V.C.

This distinguished officer, who has recently obtained the Victoria Cross, is a son of the late Major Pennefather Lloyd, and was born in the county Cork in 1853. He joined the Army Medical Department in 1877, served in the Zulu campaign, and has been a Surgeon-Major three years.

The late Thomas Barbor, M.D. St. And., J.P.

The death is announced of Dr. Thomas Barbor at his residence, Castle View, Carlingford, county Louth, at the age of seventy-one years.

Queen's College, Belfast.

The medical recess ended on Jan. 2nd, when lectures at the college and work at the hospitals were resumed.

The Belfast Hospital for Sick Children.

At a meeting of the board of management held on Jan. 4th, Dr. McCaw, Dr. Nelson, and Mr. J. J. Andrew, L.D.S., were re-elected physician, surgeon, and dentist respectively, their previous term of office having expired.

The late Alexander Harkin, M.D., F.R.C.S. Eng., J.P.

Belfast has lost, by the death of Dr. Harkin, which occurred in that city on Jan. 4th, one of its oldest and most respected citizens and medical practitioners. Dr. Harkin became a Member of the English College of Surgeons in 1840, and a Fellow in 1882, and in 1859 he obtained the M.D. of King's College, Aberdeen. He was for a lengthened period in practice in Belfast, where he was for a time surgeon to the General Dispensary and surgeon to the Royal Irish Constabulary. He was also consulting physician to the Mater Infirmorum Hospital, and ex-president of the Nestor Medical Society, as well as justice of the peace for the city of Belfast. Dr. Harkin was a man of considerable originality, and his papers, published in the medical journals, on the Nature and Treatment of Cholera, the Use of Chlorate of Potash in Scrofula and Consumption, and his ideas in reference to the importance of blistering in several ailments, have attracted much attention. Dr. Harkin was a man very much respected by his numerous friends in Belfast. He died at the age of seventy-seven, and his funeral was private.

Jan. 9th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Vaccination and Revaccination in France.

VARIOLA has been somewhat rife in Paris during the last few weeks, and "five o'clock tea and revaccination" has, greatly to the credit of the Parisian population, become quite the fashion. Anti-vaccinationists are, in fact, unknown in Paris, and the wild unreasoning prejudice so prevalent in England against the practice of vaccination is, happily, very rare in this capital. Revaccinations are made *de rigueur* in all establishments over which the Government and municipal authorities have control. Thus, two days ago the entire *personnel* of the Préfecture de la Seine to the number of 400 foregathered in the Salle Saint-Jean at the Préfecture and were revaccinated by Dr. Saint-Yves Ménard. Yesterday the mayors of the twenty Paris Arrondissements received instructions to have all the scholars of the Écoles Communales in their respective districts revaccinated immediately. It may be well to remind the readers of THE LANCET that vaccination is not legally compulsory in France; but the wholesome practice is practically obligatory, seeing that all recruits have to submit to the operation and the same obligation exists in lycées and public offices and in many business houses. While treating scarlet fever with scant respect the mass of the French people entertain a well-founded dread of the horrible disease of small-pox. This explains their willingness to submit to revaccination, which is shorn of much of the danger of infection popularly ascribed to it, in that calf lymph is almost universally employed.

The late Epidemic of Typhus Fever.

At the last meeting of the Academy of Medicine (Jan. 2nd) Professor Proust related the history of last year's epidemic of typhus fever, which came upon us as a surprise. The disease raged almost exclusively amongst vagrants. Transmission to the healthy—a rare event in typhoid fever—was here a common occurrence, many a medical man, student, nurse, and nursing sister having fallen a victim to the exanthem. In distinguishing the disease early from typhoid fever it must be remembered that the latter rarely affects the same individual twice, and a suspicious illness in a person having already had typhoid fever should put one on the alert. The duration of an attack of typhus fever is also shorter than one of typhoid fever, and the mortality of the former is greater than that of the latter, having in the epidemic in question reached 30 per cent. The early recognition of the true nature of a typhus fever epidemic is a matter of the utmost importance, since its dissemination is easily prevented by disinfection and isolation. It will be remembered that the diagnosis was at fault at Lille and Amiens, whence the disease was imported to Paris. Dr. Sapelier was the first to note the existence of typhus fever at the poor house at Nanterre, in the suburbs of the capital. Professor Proust concluded his paper by rendering merited homage to Dr. A. J. Martin for the excellent sanitary measures organised by him so successfully against the extension of the epidemic.

Jan. 10th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Further Experimental Researches on Immunity.[1]

THE experiments and results refer to tetanus only. In testing the duration of the immunity afforded by serum from various sources it was found that in rabbits treated with horse-serum the immunity was lost in sixteen days, and that there was rather strong local reaction. In rabbits treated with dog-serum the immunity vanished in fifteen days, and again there was considerable local reaction. In rabbits treated with rabbit-serum there was but slight local reaction, and the immunity was prolonged to twenty-one days. In the experiments the various kinds of serum injected were of the same immunising power, or were carefully made so by using proportional doses. From these results the obvious conclusions have been drawn that the duration of the immunity which any serum will afford is different in serums of different origin, and that in general an animal obtains the longest immunity if injected with serum from an animal of the same natural order. A further series of experiments went to show that the dose of serum necessary to save an animal which had been infected twenty-four hours previously with the minimum fatal dose is from 1000 to 2000 times greater than the dose of serum which will protect an animal when administered twenty-four hours before injection of the

[1] Berliner Klinische Wochenschrift, Nos. 49, 50, 51, 52. Tizzoni and Cattani.

poison. It was also found that within definite limits an increase in the dose of the serum had the effect of shortening the duration of the treatment.

Jan. 8th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Cholera in Austro-Hungary in the year 1893.

IN the last months of the year that has just passed a local epidemic of cholera was prevalent in the districts of Borszcow and Husniatyn in Galicia, on the Austro-Russian frontiers. During the first months of 1893 there occurred 32 cases of cholera with 21 deaths in eight villages of the district of Borszcow, and 3 cases of cholera with 2 deaths in three villages of the district of Husniatyn. Then followed a period free from cholera which lasted till March 18th, when a case of cholera was reported from Zalucze, a village in the district of Borszcow. Other cases soon followed in various villages of the same district, and marked the outbreak of another local epidemic. The disease rapidly invaded ten villages in Borszcow, and 38 cases with 27 deaths were reported, while in a village of the district of Buczacz one fatal case occurred, and an isolated case in the town of Tarnopol terminated in recovery. Towards the end of April this local epidemic seems to have been extinguished and Austria to be again free from cholera. But during the whole winter and spring, as well as in the summer, cases occurred in the adjacent parts of Hungary, forming another focus of danger for the Austrian provinces, and a further invasion of cholera occurred in Galicia during August. The first case broke out in the Galician district of Nadworna, the patient being a workman employed in the construction of the new railway connecting the Hungarian town of Szigeth (Marmaros) with the Galician town of Stanislaw. Between Aug. 3rd, the day when the first case appeared in Nadworna, to Dec. 17th, the last date upon which a case of cholera had been recognised in Galicia, 154 villages became infected, the number of cases being 1448 with 848 deaths. Especially in the first days in August the epidemic was a very severe one, and a very wide extension of the area of infection was feared by all Austrian sanitary authorities who were aware of the miserable sanitary and social conditions of the Galician villages; but fortunately the epidemic from the beginning assumed a mild character. It is a singular fact that, although the workmen employed on the railway were chiefly Italian labourers (so that on returning home they had to pass through nearly the whole length of the Austro-Hungarian empire), all the other provinces remained free from the disease; and we heard of but one imported case, that of a workman who died at Cilli (Styria), on his homeward journey. If we compare the statistics of the epidemic of 1893 with those of the previous big epidemics, we see that the outbreak was more severe than that of 1892. The figures for 1893 were 1520 cases with 900 deaths, or a mortality roughly of 60 per cent., as against 214 cases with 125 deaths for 1892. In 1886, when cholera attacked the southern provinces, 1809 cases were reported, with 1119 deaths; but even these figures were much below those of the epidemic in 1873, when 106,441 cases occurred in Galicia. With regard to the therapeutics no new fact has been observed during the epidemic in Austria. In Hungary anti-cholera inoculations (Haffkine's method) have been tried by Professor Angyan of Budapest, and, he states, with favourable results. The invigorating effect of salt infusions in the algide stage of the disease has been observed by all who tried it.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council of the Royal College of Surgeons of England was held on Thursday, the 11th inst., Mr. J. W. Hulke, President, in the chair.

The report of the Museum Committee was approved and confirmed, and, in accordance with the recommendation of that committee, the price of the revised edition of the Teratological Catalogue was fixed at 5*s*.

The Committee on Regular Meetings of Fellows presented a report on Dec. 7th, 1893, and, acting on further instructions from the Council, have recommended that these meetings shall be for consultative purposes only and can have no official or corporate character or efficacy. The meetings shall be summoned by the Council at such times and for such objects as may by the Council be thought desirable, either with or without a requisition from the Fellows. Such requisition must be signed by at least thirty Fellows and contain a statement of the object or objects for which the meeting is requested. Two meetings shall be held in each year on the following days—viz., the first Thursday in July and the first Thursday in January. The subjects to be considered shall be: (*a*) matters referred to the meetings by the Council; (*b*) motions introduced by Fellows. The motions introduced by Fellows shall be signed by the mover, or by the mover and other Fellows, and must be received by the Secretary not less than twenty-one days before the meeting. The President shall determine what motions are in order and direct the arrangement of the agenda. The quorum of each meeting shall be thirty, and if at the expiration of fifteen minutes from the hour for which the meeting has been summoned a quorum be not present the meeting shall not take place. If after the commencement of the meeting it shall be found upon a count that a quorum be not present, the meeting shall be dissolved. The President or one of the Vice-Presidents, or in their absence the senior member of the Council present, shall be chairman of the meeting, and the chairman's decision shall be final upon all points of order which may arise.

The Secretary reported that no Dissertation on Hydrophobia, the subject of the Jacksonian Prize for the past year, had been received, and it was resolved that the amount of the dividends accruing from the Jacksonian Fund should be added to the principal.

The Council had under consideration some cases of alleged unprofessional conduct by Members of the College. It was moved by Mr. Tweedy, and seconded by Mr. Willett: That it be referred to a committee to consider and report to the Council on the desirability of again applying to the Secretary of State for an alteration of Section 16 of the by-laws dealing with the misconduct of Fellows and Members, and if, in their opinion, it be desirable to further report on the form of such alteration. The motion was carried.

It was announced that the President, Mr. J. W. Hulke, had undertaken to deliver the Hunterian Oration in February, 1895, and he was duly appointed.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the second examination of the Board in the subjects indicated:—

Monday, 8th inst.:—

Passed in Anatomy and Physiology.—Messrs. Edward Harding, of Owens College, Manchester; Herbert Robert Cambridge Newman, of University College, Bristol; Arthur Percival Nixon, of University College, Liverpool; Percy Stanhope White, of Masons College, Birmingham; James John Day, of Middlesex Hospital; James Andrew Craig, of Queen's College, Belfast; David Edward Evans, of London Hospital and Mr. Cooke's School of Anatomy and Physiology; and Allen Mackenzie Cleghorn, of Trinity College, Toronto, Canada.

Passed in Anatomy only.—Messrs. Samuel Sugden, Thomas Boulton, and George Richards Smith, of Owens College, Manchester; James Bradley Hughes, of University College, Liverpool, and Durham University; Thomas MacDowell, of Queen's College, Belfast; Arthur Horace Gadsden, of St Mary's Hospital; Robert Neville Geach, of St. Bartholomew's Hospital; Eugene Grant, of King's College, London; Henry Creemer Cooper and Gilbert Holland Ransome, of St. George's Hospital; George Herbert Alcock, of St. Thomas's Hospital; and John Wynne Yorke-Davis, of Charing-cross Hospital.

Passed in Physiology only.—Messrs. William Henry Clough and Charles Henry Dearden, of Yorkshire College, Leeds; Frank Elliott-Meade, of Yorkshire College, Leeds, and St. Bartholomew's Hospital; Frederick Marsden Aldred, George Abraham Parker, William Arthur Pierce, and Frederick Leigh Angoir, of University College, Liverpool; Herbert William Dudgeon, of Guy's Hospital; Edward Collett Hort, of Cambridge University and Guy's Hospital; Sidney Kendrick Vines, Alfred Ernest De Vall, and Charles Henry Smart, of Masons College, Birmingham; and George Edward Palmer, of the Royal College of Surgeons, Ireland. Eight gentlemen were referred in both subjects, seven in anatomy only, and seven in physiology only.

Tuesday, 9th inst.:—

Passed in Anatomy and Physiology.—Messrs. Claude Lionel Chevallier, of St. Thomas's Hospital; James Oulvie, of Cambridge University and St. Thomas's Hospital; John Oldsworth Garland and Nynian Yeo Lower, of Guy's Hospital; Hugh Prideaux Turnbull, of St. George's Hospital; Henry Reginald Ellis, of St. Bartholomew's Hospital; James Bligh Wall, of St. Mary's Hospital and Mr. Cooke's School of Anatomy and Physiology; Thomas Blanchard

Sellors, of Middlesex Hospital; and Thomas Burns Dakin, of London Hospital.

Passed in Anatomy only.—Messrs. Stewart Septimus Simmons and Arthur Brebner, of University College, London; Harry Guy Mallum, of Oxford University and St. Mary's Hospital; John Norman Walker, of St. Thomas's Hospital; George Bruce Pearson, Walter Francis Reckitt, and Frederick Golding-Bird, of Guy's Hospital; Richard Kay, of Owens College, Manchester, and Guy's Hospital; John James Blagden, of St. Bartholomew's Hospital; Clement John Baker and Edwin Cecil Dare Bascombe, of Middlesex Hospital; William John Albert Kirby, of Middlesex Hospital and Mr. Cooke's School of Anatomy and Physiology; John Stafford Mellish, of St. George's Hospital; Nevill Pearse King, of Charing-cross Hospital; and Edward Harold Cooper, of London Hospital.

Passed in Physiology only.—Messrs. Arthur Gordon Ede and Arthur Rochford Todd, of University College, London; Walter Lisle Taylor Goodridge, of Guy's Hospital, Durham University, and University College, London; Augustus Joseph Wernet and Percy James Curtis, of Guy's Hospital; Charles Gouldsmith France and Alfred Woolcombe, of St. Bartholomew's Hospital; James Herbert Fergusson and Wilfred Becker Carter, of St. George's Hospital; and Lyonal John Lock, of London Hospital and Trinity College, Dublin. Ten gentlemen were referred in both subjects, two in anatomy only, and seven in physiology only.

Wednesday, 10th inst.:—

Passed in Anatomy and Physiology.—Messrs. Edward Usher Croker, Arthur William Tuke, and Julius Hodgetts Smith, of St. Thomas's Hospital; Edward Hamilton Bruce Fox, Herbert Campbell Manning, Humphry Allen, and Benjamin Jones, of St. Bartholomew's Hospital; William Denison Wiggins, of St. Mary's Hospital; William Stacey Aslett, Clovis Leopold Seccombe, and Percy Barton, of Middlesex Hospital; David Rice, Edward Dawbury Hancock, Charles Robert Evans, and Walter Travers Clarke, of Guy's Hospital; and Edward Southwood Langworthy and George William Cecil Hodges, of St. George's Hospital.

Passed in Anatomy only.—Messrs. Charles Patrick Higgins and Ratanji Bejanji Sunavala, of Guy's Hospital; and Hugh Griffin McKinny, of St. Bartholomew's Hospital.

Passed in Physiology only.—Messrs. Horace Kemp Palmer, of St. Bartholomew's Hospital; Francis Bennett, of St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology; Frank Burnard Mudd, of Middlesex Hospital; George Bernard Kaufmann, of London Hospital and Mr. Cooke's School of Anatomy and Physiology; Algernon Edward Rouse, of St. George's Hospital; Jeffrey Gott, of King's College, London; and Sydenham Feast Gifford Ransford, of St. Mary's Hospital. Nine gentlemen were referred in both subjects, three in anatomy only, and seven in physiology only.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed in the Primary Examination for the diploma of this society:—

Chemistry.—T. Christie, Liverpool; H. Whittaker, Birmingham.

Materia Medica, Botany, and Pharmacy.—W. H. Burnhill; M. S. S. Coghill, Royal Free Hospital; J. Friend, Leeds; E. M. Henwood, Royal Free Hospital.

Materia Medica and Botany.—O. Hall, Durham.

Biology.—M. E. Bennett, E. S. Milestone, and M. Pantin, Royal Free Hospital.

Anatomy and Physiology.—D. A. Anderson, Belfast; T. N. Harrowell, Leeds; E. M. Henwood, Royal Free Hospital; W. McCall, Charing-cross Hospital; C. A. C. Salmon, Guy's Hospital.

Anatomy.—E. M. Aikin, Royal Free Hospital; H. J. Brookes, St. Mary's Hospital; W. F. Chrispin, Leeds; M. P. Gabe, Middlesex Hospital; H. Greenwood, London Hospital; A. R. Mansell, St. Bartholomew's Hospital; H. C. Moore, Leeds; C. J. H. Riches, Middlesex Hospital; E. M. Wells, Royal Free Hospital.

Physiology.—W. F. E. Ashton, Birmingham; G. W. J. Baker, Birmingham; H. G. C. Dring, St. Bartholomew's Hospital; C. E. Etches, Leeds; A. J. Hayes, Middlesex Hospital; J. Jacob, King's College; H. H. Monckton, King's College; H. K. Palmer, St. Bartholomew's Hospital; W. O. Piper, Westminster Hospital; T. W. Wakem, Charing-cross Hospital; R. P. H. Whitmarsh, St. Thomas's Hospital.

NEW HOSPITAL AT THAMES DITTON.—On the 5th inst. several of the principal inhabitants of Thames Ditton, including the vicar, assembled for the purpose of assisting by their presence in the opening of a small hospital at Weston-green. The chief part of the ceremony was performed by Miss Went. The building contains an entrance hall and the necessary appurtenances, together with two general wards and one reserved for accidents. The cost of the structure is comparatively trifling, some £800, the whole of which has been raised. There will be five beds, and this number will be capable of increase.

ROYAL MICROSCOPICAL SOCIETY.—At a meeting of this society held on Dec. 20th, 1893, Mr. A. D. Michael, F.L.S., President, in the chair, Mr. E. M. Nelson exhibited and described a new pattern microscope specially designed for agriculturists. Mr. Nelson also exhibited a new form of metallic chimney for microscope lamps. On behalf of Mr. J. W. Lovibond, Mr. Nelson exhibited some new coloured screens for use with the microscope. Mr. J. W. Gifford read a paper on "A new Monochromatic Light Screen," illustrating the subject by means of the lantern. Mr. T. F. Smith read a paper on "The Resolution of Pleurosigma Angulatum," illustrated with photomicrographs shown by the lantern.

NOTIFICATION OF INFECTIOUS DISEASES.—A large number of influential members of the medical profession in Leeds assembled on the 5th inst. for the purpose of expressing their opinion on the advisability of adopting in the city the Notification of Infectious Diseases Act. The following resolutions were unanimously passed:—Moved by Mr. Pridgin Teale, and seconded by Mr. Charles Richardson, "That this meeting of medical men in Leeds hereby records its opinion that the early notification of infectious diseases is calculated to be a valuable adjunct in arresting the spread of epidemics and in assisting preventive sanitary work." Moved by Dr. Dobson, and seconded by Mr. Holmes, "That this meeting would urge upon the city council the desirability of adopting the Notification of Infectious Diseases Act of 1889." Moved by Dr. Hellier and seconded by Mr. J. S. Loe, "That a deputation, consisting of the following gentlemen, with power to add to their number, wait on the city council to present these resolutions: Dr. Barrs, Dr. Churton, Mr. H. Coleman, Dr. Dobson, Dr. Eddison, Mr. J. Hick, Mr. F. Holmes, Mr. Jessop, Mr. H. Rowe, Mr. C. Richardson, Mr. Scattergood, Mr. Pridgin Teale, and Mr. C. J. Wright."

THE ELEVENTH INTERNATIONAL MEDICAL CONGRESS.—As already stated in THE LANCET, this congress will take place at Rome from March 29th to April 5th in the present year, and in accordance with arrangements made with the committee of the German Chirurgical Society, the meeting of this body will be postponed until April 18th for the purpose of enabling the German surgeons to attend the congress. The congress committee has opened a special office at Rome by means of which lodgings may be provided for members at hotels and private houses. Messrs. Thomas Cook and Son have also been commissioned to assist inquirers seeking similar accommodation. By means of the same agency members of the congress will be enabled to visit Naples and Sicily, and excursions will be planned for Pompeii, Vesuvius, and other places of world-wide interest. Excursions will also be arranged in Rome under the guidance of Professor Forbes. We understand that Professor A. Jacobi of New York has promised to read an address in full congress, and that its title will be "Non Nocere." The "International Exposition of Hygiene and Alimentation" has been definitively fixed for opening on March 20th, 1894. All those who intend to take part in the Exposition ought to apply at once for the "Regolament" (code of rules) and the forms to be filled up in order to gain admission for their exhibits. These may be had on application to the "Commissariato Generale per l' Italia," Borgo Stella No. 11, Florence.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Mr. John B. Barkworth of South Leigh, near Havant, Hants, has bequeathed £500 to the Hospital for Sick Children, Great Ormond-street, London.—Mrs Martin, late of Revington, near Bolton, has bequeathed £3000 to the Bolton Infirmary, Lancashire; and £1000 each to the Southport Convalescent Hospital and Sea-Bathing Infirmary and the Royal Asylum for Imbeciles, Lancaster.—The late Mr. James Jardine of Manchester has bequeathed £1000 each to the Ardwick and Ancoats Hospital and Dispensary and the Northern Counties Hospital for Incurables; and £500 each to the General Hospital and Dispensary for Sick Children, Pendlebury; the Royal Eye Hospital, Manchester; the St. Mary's Hospital and Dispensary, Manchester; and the Clinical Hospital for Women and Children, Manchester.—The late Mr. Algernon Peckover of Sibalds Holme House, Wisbech, St. Peter's, Isle of Ely, has bequeathed £50 each to the Bradford Infirmary and the Bradford Fever Hospital and £1000 to the North Cambridgeshire Cottage Hospital.—His son, Mr. A. Peckover, the new Lord-Lieutenant of Cambridgeshire, who is by virtue of his office President of Addenbrooke's Hospital at Cambridge, has presented £1000 to the hospital in commemoration of the honour conferred upon him by the Queen.—The Royal Hospital for Diseases of the Chest, City-road, London, has received a donation of £100 from the treasurer, Mr. S. Hope Morley, as a New Year's gift.—The Salters' Livery Company has granted a donation of 100 guineas to Guy's Hospital.—The Grocers' Livery Company has given £100 to the Seaside Convalescent Hospital, Seaford; and £50 to the National Truss Society.—The late Mrs. Mary Edwards of Great Missenden has bequeathed £200 to the High Wycombe and Earl of Beaconsfield Memorial Cottage Hospital at High Wycombe.—The late Mrs. J. H. Hetley has bequeathed £500 to the Peterborough Infirmary.—Mr. Joseph Rand, late of Hadleigh, Suffolk, has bequeathed £1000 each to the East Suffolk Hospital and the Eastern Counties Asylum for Idiots.—The Merchant Taylors'

Livery Company has contributed 100 guineas to the Central London Throat and Ear Hospital, Gray's-inn-road.—The Corporation of London has granted a donation of £100 to the Hampstead Home Hospital and Nursing Institute, Parliament-hill-road; £50 to the Mary Wardell Convalescent Home for Scarlet Fever, Stanmore; and 100 guineas to the University College Hospital, London.—The late Mr. Thomas Sellers Higgins of Huddersfield, and formerly of Wakefield, has bequeathed £1000 each, free of legacy duty, to the Clayton Hospital at Wakefield and the Huddersfield Infirmary.—The late Mr. Robert Hymers of Stokesley has bequeathed £1000 each to the North Ormesby Cottage Hospital, Middlesbrough, and the North Riding Infirmary.

Parliamentary Intelligence.

HOUSE OF COMMONS.

THURSDAY, JAN. 4TH.

Dangerous Trades.

THIS subject was raised by a question addressed to the Home Secretary by Mr. Burns, who asked if the right hon. gentleman would, in view of the recommendation given in the report of the Chemical Works Committee to adopt an eight-hour shift in the alkali and other dangerous trades, take steps to enforce the reduction specified.—Mr. Asquith said he hoped the recommendation would be voluntarily acted upon by the firms engaged in such trades. He said it was his intention to propose, next session, legislation which would give power to the Secretary of State to deal with unreasonably long hours of labour in such trades. The right hon. gentleman further stated, in reply to Sir C. Dilke, that though the report of the committee was very voluminous there would be no avoidable delay in publishing the evidence given before that body.

Hours of Work of Railway Employés.

Mr. Mundella, replying to a question by Mr. Sweetman, in reference to the recent inquiry into the alleged excess of work on the Great Northern Railway of Ireland, said several inquiries of the kind had been made, but the inquiry mentioned was the first instance in which the investigation was of a formal character. General Hutchinson's report would be laid on the table of the House.

Sale of Drink to Drunken Persons.

Mr. Asquith, in reply to Mr. Burns, said the attention of the police authorities had been repeatedly called to the increasing practice of supplying drink to persons whilst in an intoxicated condition, and their instructions were to enforce the law with the greatest strictness. The right hon. gentleman furthermore stated, in answer to Mr. Conybeare, that he would instruct the police to take note of any case in which inducements were held out to children to partake of intoxicating drinks.

FRIDAY, JAN. 5TH.

The Working Day at Woolwich Arsenal.

On the above subject questions were put by Mr. Burns and Colonel Hughes, and in reply Mr. Campbell-Bannerman stated that inquiry instituted by himself and his colleagues had satisfied him that the conditions and circumstances connected with the work carried on at the Woolwich Arsenal were such as to admit of a reduction of the working day to eight hours, without diminution of the wages paid. The right hon. gentleman added that he looked for the loyal cooperation of the workmen in making the change advantageous to themselves and at the same time without detriment to the public service.

Human Remains at the East-end.

Mr. Asquith, in reply to Sir J. Fergusson, said his attention had been called to the "interesting specimens" of human remains lately discovered at Whitechapel. He doubted whether any local authority had any responsibility in the matter, but he presumed that those who superintended the excavations would see that the bones were decently interred. He ventured the supposition that at the time of the Great Plague many bodies of the victims of that scourge were buried indiscriminately and without the rites pertaining to Christian burial.

Vaccination Prosecutions at Rye.

On this subject Mr. Hopwood put a question to the Home Secretary with respect to the part taken by Major Stilman, as justice of the peace, in inflicting fines and costs on a person for non-compliance with the vaccination laws, the major being also chairman of the board of guardians on the occasion when the prosecutions were ordered.—Mr. Asquith said that, according to his information, Major Stilman, though an *ex-officio* guardian, was not present at the meeting of the board when the proceedings in question were ordered to be taken.

MONDAY, JAN. 8TH.

The Contagious Diseases Acts in the Crown Colonies.

Replying to a question put by Mr. Stuart, Mr. Buxton said that some months ago the attention of the Secretary of State had been directed to the point raised, and he had addressed despatches to the Governors of the three colonies referred to, suggesting the repeal of the Contagious Diseases Acts in those dependencies. Replies had been received from the Governors of Hong Kong and the Straits Settlements, and the reply of the Governor of Fiji might be expected to be forthcoming shortly, when a final decision would be arrived at.

Unwholesome Houses in London.

Mr. R. G. Webster wished to know what steps, if any, had been taken towards carrying out the recommendations of the arbitrator appointed by the Home Office in respect of the insanitary areas in Somers-town.—Mr. Asquith said he had been informed by the clerk to the vestry that a surveyor was appointed some months ago to inspect every one of the houses in the area referred to, and that his report was in the hands of the printer, and would soon be placed before the vestry.

TUESDAY, JAN. 9TH.

Life-saving Apparatus.

Mr. Mundella, in reply to a question on this subject, said the directions on the rocket apparatus were painted in English and French, and not in any other language, as otherwise the tally-board would require to be much larger than it was at present. The extra size, moreover, would entail greater difficulty in hauling the board through a rough sea.

London Lodging-house Keepers.

Mr. Bartley asked the Home Secretary whether he had received three deputations from the Health and Housing Committee of the London County Council on the subject of the transfer of registered lodging-houses from the police to the above Council.—Mr. Asquith said deputations to the number mentioned had been received for the purpose mentioned in the question, but after careful consideration he did not think any good purpose would then be served by receiving them, and he remained of that opinion. The right hon. gentleman added that he did not agree with the view that the London County Council had become large competitors with the members of the Registered Lodging-house Keepers' Association.

THURSDAY, JAN. 11TH.

Female Factory Inspectors.

Mr. Sexton asked the Secretary of State for the Home Department whether he had considered a resolution of the Belfast United Trades Council, in which it was represented that about 50,000 females were engaged in the textile industries of Belfast, and that the appointment of a female inspector for that city was absolutely essential, and whether it was intended to appoint any female inspectors of factories for Ireland.—Mr. Asquith replied that no female inspector was appointed to any particular place, but an assistant male inspector had been appointed to the Belfast district. Special inquiry had recently been made by his instruction into the linen factories of Belfast, with the result that rules had been framed which, it was hoped, would improve the state of things.—Mr. John Burns asked whether it would not be of advantage to have a female inspector resident in Belfast.—Mr. Asquith said they were obliged to economise in these matters, and as he did not see the prospect of having more than four female inspectors for Great Britain and Ireland, he could not undertake that any one of them could be permanently resident in any place, however important. He admitted that special attention should be given by the female inspectors to such a place as Belfast.

The Swine Fever Act.

In answering a question put by Colonel Nolan, Mr. John Morley said that the object of the Irish Government was to work this Act as liberally as was within its power. Evidence was already forthcoming as to the popularity of the Act.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANNINGSON, B., M.D. Camb., M.R.C.S., has been reappointed Medical Officer of Health for the Cambridge Urban Sanitary District.

COWPER, J., M.B., C.M. Edin., has been appointed Medical Officer of Health for the Shanklin Urban Sanitary District of the Isle of Wight Union, vice Dabbs, resigned.

DIXON, F. J., M.B., B.C. Camb., has been appointed Assistant House Surgeon to the General Hospital, Birmingham.

DYER, B. (of London), has been appointed by the Essex County Council the District Agricultural Analyst for Essex.

FARQUHARSON, GEORGE S., M.B. Lond. Univ., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Sanitary Surveyor of the Board of Trade for the Port of Southampton (jointly with Dr. Grange).

GODWIN, A. H., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Wallasey Dispensary, vice Griffiths, resigned.

GOVER, L. D., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Resident Assistant to the Wolverhampton and Staffordshire General Hospital, Wolverhampton.

GRANGE, FRANK, M.D. Lond. Univ., Dip. Pub. Health, Camb., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Sanitary Surveyor of the Board of Trade for the Port of Southampton (jointly with Dr. Farquharson). He has also been appointed Medical Superintendent of Quarantine under the Privy Council.

HANN, REGINALD G., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Medical Officer to the Leeds Public Dispensary.

HENRY, R. W., M.B., B.Ch. Dub., has been reappointed Junior House Surgeon to the Birmingham and Midland Eye Hospital.

HILL, CHARLES ALEXANDER, M.B., B.C., B.A. Cantab, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to St. George's Hospital.

JAMES, W. DALE, M.R.C.S. Eng., L.S.A., has been appointed Surgeon for Skin Diseases to the Sheffield General Infirmary.

KNIGHTS, J. W., F.C.S., has been reappointed Public Analyst for Cambridge.

LOVETT, W. L., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for the Colne and Marsden Urban Sanitary Districts, vice Brodribb.

ROOK, A. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Eastbourne Union, vice Farnell.

THOMPSON, S. R., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 1 Sanitary District of the St. Olave's Union, vice Wightwick.

VINCENT, HENRY BIRD, has been appointed Medical Officer of Health to the Mitford and Landitch Rural Sanitary Authority, vice Sir Frederic Bateman, M.D., resigned.

WILEY, A. O., L.R.C.P. Edin., L.R.C.S. Irel., has been appointed Medical Officer of the Knaresborough Workhouse, vice Sweeting, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRADFORD INFIRMARY.—Dispensary Surgeon. Salary £100 per annum, with board and residence.

BUCKINGHAMSHIRE GENERAL INFIRMARY, Aylesbury.—Resident Surgeon and Apothecary. Unmarried. Salary £80 for the first year, rising £10 per annum to £100, with board, lodging, washing, coals, and candles in furnished apartments.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road, W.C.—House Surgeon. Rooms, coals, and lights provided.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane-square.—Surgeon.

CITY OF SHEFFIELD.—Assistant Resident Medical Officer for the two City Hospitals for the Treatment of Cases of Infectious Diseases. Salary £120 per annum, with board, lodging, and attendance.

CITY OF MANCHESTER.—Medical Officer of Health for the City of Manchester. Salary £850 per annum. Applications to the Town Clerk, Town Hall, Manchester.

DARLINGTON HOSPITAL AND DISPENSARY.—House Surgeon, unmarried. Salary £100 per annum, with board and lodging.

DORSET COUNTY HOSPITAL, Dorchester.—House Surgeon, to reside and board in the Hospital. Salary £70.

EAST-END BRANCH OF THE CHILDREN'S HOSPITAL, Sheffield.—House Surgeon. Salary £70 per annum, with board, lodging, and washing.

FINSBURY DISPENSARY, Brewer-street, Goswell-road, E.C.—Physician. An honorarium of £40 per annum will be paid during the pleasure of the Committee.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physicians.

HOXTON HOUSE ASYLUM, London.—Clinical Assistant. Board, lodging, and washing provided.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle-street.—House Surgeon. Salary £85 per annum, with board and lodging.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with residence and maintenance in the house.

PARISH OF ROUSAY AND EGILSHAY, ORKNEY.—Medical Officer (resident) for the Parish of Rousay and Egilshay. Salary £51 sterling per annum. Applications to Inspector of Poor, Rousay, Orkney.

ROYAL SOUTH LONDON DISPENSARY, St. George's-cross, S.E.—Surgeon-in-Ordinary, to visit patients at their own homes in the Waterloo District. Honorarium £20 per annum.

ROYAL PIMLICO DISPENSARY, 104, Buckingham-palace-road, S.W.—Attending Medical Officer.

ST. GEORGE'S HOSPITAL, S.W.—Physician.

ST. GEORGE'S HOSPITAL, S.W.—Assistant Physician.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—Lecturer on Materia Medica and Pharmacy. Stipend £50 a year.

WREXHAM INFIRMARY AND DISPENSARY.—House Surgeon. Salary £80 per annum, with furnished rooms, board, gas, coal, and attendance.

Births, Marriages and Deaths.

BIRTHS.

BAYS.—On Jan. 4th, at 77, Finchley-road, N.W., the wife of James T. Bays, M.D. Lond., of a daughter.

DODSON.—On Jan. 9th, at Hughenden, Earlsfield, S.W., the wife of Arthur E. Dodson, M.R.C.S., of a daughter.

MURDOCH.—On Jan. 3rd, at 35, Sea-road, Bexhill, Sussex the wife of Andrew Murdoch, M.B. and C.M., of a son.

MARRIAGES.

FULLER—BUCHANAN.—On Saturday, Dec. 9th, 1893, at Mowbray, Cape Town, South Africa, by the Rev. A. Vine Hall, Edward Barnard Fuller, M.B., C.M. Edin., F.R.C.S.E., son of T. E. Fuller, Esq., M.L.A., of Cape Town, to Minnie, daughter of the Hon. Mr. Justice James Buchanan, late Judge President of the High Court, Kimberley, South Africa.

KERR—HENDERSON.—On Jan. 11th, 1894, at Booterstown Church, County Dublin, by the Very Rev. Dean Dickinson, D.D., assisted by the Rev. Professor Stokes, D.D., T.C.D., Norman-Kerr, M.D., F.L.S., London, to Edith Jane, daughter of the late James Henderson, Esq., Belvidere Lodge, Newry, co. Down.

MOSLEY—INGLIS.—On Jan 4th, at Christ Church, Burbage, Buxton, by the Rev. Canon Mitchell, Vicar of Prescot, Lancashire, Reginald Lawson Mosley, B.A., M.B., Univ. Dub., of Newtown, Waterford, son of the late James Mosley, to B. Constance ("Con") Inglis, youngest daughter of the late John Inglis, M.D., H.M. Bengal Army.

VICARS—HASKETT-SMITH.—On Jan. 10th, at St. Mary's Church, Cadogan-square, S.W., Frederic George Vicars, M.R.C.S., L.R.C.P., son of the late Colonel W. H. Vicars, to Eugéne Matilde, daughter of Captain Haskett-Smith, late Cameronian Highlanders.

DEATHS.

GRAVELY.—On Jan. 5th, at Cowfold, Sussex, Thomas Gravely, M.R.C.S., aged 76.

GOOD.—On Jan. 5th, at St. Neots, Huntingdonshire, Frederick Thomas Good, M.R.C.S., &c., aged 33.

SAUNDERS.—On Jan. 7th, at Woodside, St. John's-park, Ryde, Surgeon-General George Saunders, Bengal Staff Corps, retired, aged 74.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET Office, January 11th, 1894.

		Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
Jan.	5	29·83	E.	16	F.	34	26	15	0·05	Overcast
,,	6	29·63	E.	24	F.	30	30	16	0·14	Snowing
,,	7	29·81	N.E.	25	F.	26	26	22	—	Foggy
,,	8	30·11	E.	26	F.	38	38	23	—	Foggy
,,	9	29·79	S.E.	37	37	41	41	26	0·06	Raining
,,	10	29·83	S.	41	41	51	50	34	0·43	Overcast
,,	11	29·85	S.W.	47	45	72	52	41	0·02	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.).

TUESDAY.—London (2 P.M.), (St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), Great Northern Central (2.30 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Great Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Chelsea (2 P.M.), Soho-sq. (2 P.M.), North West London (2 P.M.)

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.). Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY.—PATHOLOGICAL SOCIETY OF LONDON.—Dr. F. J. Smith: Inflamed Vermiform Appendix.—Dr. Wheaton: Cranial Deformity in Infants with Fusion of Fingers and Toes.—Dr. Kanthack: Pyæmic form of Actinomycosis in Man.—Dr. Voelker: Aneurysm of Aortic Valve in a Child.—Dr. Tooth: Two Cases of Ulcerative Colitis. Dr. Scholefield; Sarcoma of the Suprarenal Body in a Child.—Mr. Jackson Clarke: Cyst of the Epididymis.—Mr. James Berry: Passive Dilatation of the Sigmoid Flexure. Card Specimen:—Mr. Jackson Clarke: Distoma Crassum.

THURSDAY.—SOCIETY OF ANÆSTHETISTS (20, Hanover-square).—8.30 P.M. Dr. Dudley W. Buxton: A Note on Cardiac Asthenia under Chloroform.

LECTURES AND ADDRESSES.

TUESDAY.—ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: Locomotion and Fixation in Plants and Animals.

LONDON SKIN HOSPITAL.—8 P.M. Mr. James Startin: Etiology and Treatment of Psoriasis, with Remarks on Tar and Chrysophanic Acid.

WEDNESDAY.—SOCIETY OF ARTS.—8 P.M. Mr. A. Laurie: White Lead Substitutes.

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Rev. Canon Alager: The Life and Genius of Swift.

SOCIETY OF ARTS.—8.30 P.M. Mr. R. D. Oldham: The Petroleum Fields of India: their Present Condition and their Probable Future. (This meeting will be held at the Imperial Institute, S.W.)

FRIDAY.—ROYAL INSTITUTION.—9 P.M. Prof. Dewar: Scientific Uses of Liquid Air.

SATURDAY.—ROYAL INSTITUTION.—3 P.M. Prof. W. H. Cummings: English Schools of Musical Composition. (With Musical Illustrations.)

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

PUBLISHER'S NOTICE.

IN order to facilitate the work of reference to the volumes of THE LANCET, we have arranged to publish duplicate copies of the Index to each half-yearly volume in a form in which they may be subsequently filed or bound together. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Publisher of THE LANCET.

THE PHYSICIAN AS PILOT.

"THE greatest physician," it has been said, "like the greatest military commander, is he who commits fewest mistakes." Hippocrates himself has anticipated this saying. In his treatise on Ancient Medicine, Chapter 9, occurs the passage: "I should emphatically praise the physician whose errours are small (*τὸν σμικρὰ ἁμαρτάνοντα*)." Then follows the famous comparison of the medical man to a pilot—a comparison often utilised though rarely referred to its original author. The illustration would come with peculiar force to an audience composed, as that of Hippocrates mainly was, of islanders in the Greek Archipelago, the intricate navigation of which and the dangers thence arising were among the *loci communes* of classic poetry. Witness the well-known lines of Horace (Odes I., 1 ;.

> "Interfusa nitentes
> Vites æquora Cycladas."
>
> ("Beware the narrow seas
> That lave the shining Cyclades.")

J. A. McG. (Edinburgh).—A question so worded and a statement so drawn are obviously not the work of a person with any medical knowledge. Our correspondent had better consult a medical man as to the "rationale of operations."

C. W. C.—The qualification in question is only a surgical one and does not justify the title of "Dr." or "Physician."

THE SODEN FUND.

To the Editors of THE LANCET.

SIRS,—The following subscriptions have been received since you kindly inserted a paragraph in THE LANCET referring to the above case.

I am, Sirs, yours truly,

Swansea, Jan. 2nd, 1894. W. F. BROOK.

Sir Henry Thompson	..	£2	2	0	Dr. W. E. Parkes ..	..	£0 10 6
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Mr. H. T. Buttin ..	..	1	0	0	Mr. G. C. Franklin ..	..	0 5 0
Mr. Wm. Price ..	..	1	0	0	Mr. Wm. Berry ..	..	0 5 0
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Mr. Alf. Freer ..	..	0	10	6	Dr. Telfourd Smith	..	0 1 0
Mr. W. F. Brook ..	..	0	10	6			

A CHLOROFORM INCIDENT.

AN anonymous correspondent of a daily paper describes in a somewhat humorous way an incident which occurred in his experience in the early days of chloroform administration. It would appear from the communication referred to that on one occasion the writer, having a desire to carry out some experiments in photography, entered a druggist's shop for the purpose of purchasing the ingredients necessary to complete the contemplated process, and seeing on the counter an ounce bottle of chloroform, the idea struck him on his arrival home to try what effect the inhalation of the drug would have upon himself. Accordingly, seated in an armchair, he placed two drops of the liquid on a handkerchief, and removing the bottle from before him he took a few sniffs. The sensation at first was not unpleasant, so he determined to increase the dose. Presently, as it seemed to him, he found himself recumbent on the floor, and remembered hearing the voices of onlookers, some of whom gave a very doubtful prognosis as to the result of what was regarded as a swoon, whilst others of greater discrimination discerned evidence of the survival of life, an impression the accuracy of which was confirmed by the gradual resuscitation, after the lapse of two hours and a half, of the subject of their solicitude. It would appear from the sequel that at the onset of the anæsthesia the servant-maid, thinking her master was in a fit, and that the bottle on the table contained "salts," conceived the idea of utilising the contents of the vessel as a remedy providentially at hand, and desiring to ensure its efficacy poured some of the liquid into her hands and rubbed it over the mouth and nostrils of the unconscious man.

R. K. M.—The question is one of taste and friendship rather than of professional ethics. The public advertisement of vacant offices implies the right of every registered practitioner to become a candidate.

"WANTED A DIAGNOSIS."

To the Editors of THE LANCET.

SIRS,—The case described by Mr. Grimshaw in THE LANCET of Dec. 2nd, 1893, and the ensuing correspondence have interested me considerably. May I suggest that the case may be one of ostitis more or less centrally situated in the os calcis (or possibly in the internal malleolus, where it is certainly more common). During my hospital career I have seen several cases of ostitis in the ends of the long bones. The most prominent symptom is pain of an intermittent character about the seat of disease, often described by patients as of a boring, aching nature, or as resembling neuralgia; it may be absent for days or weeks, then recurring and lasting for a day or two, to again disappear for a period. Tenderness is very marked and accurately localised to one spot. Both symptoms are of long duration and resist treatment; swelling may or may not be present, there is seldom heat or redness, and the constitutional symptoms are slight or absent. One case in the head of the tibia of a boy aged fourteen was greatly relieved by a long course of syrup of phospate of iron and cod-liver oil with the local application of iodide of lead ointment. Two or three others were trephined, a few drops of pus or a small bead of granulation tissue being removed with complete relief of the symptoms. If, as Mr. Arthur Watson suggests, the case is one of periostitis of the os calcis, should not the local symptoms of heat and redness be more marked, even though there is a thick pad of fibrous tissue between it and the surface?

I am, Sirs, yours faithfully,

MURTAUGH HOUGHTON, M.R.C.S., L.R.C.P.,
Late Assistant House Surgeon, Wolverhampton General Hospital.

Weston-super-Mare, Jan. 1st, 1894.

STRIKES AND LOCK-OUTS.

PAPERS read by Messrs. Bodington and J. B. Pilter at the last meeting of the British Chamber of Commerce at Paris, though not directly medical in their purport, contain, nevertheless, matters which touch indirectly the health and well-being of those who are more or less concerned in industrial disputes. In the papers referred to, the writers, while deprecating strikes as being disastrous in their results alike to masters and men, and approving arbitration as a far superior method of resolving trade conflicts, yet point out certain disadvantages and inconveniencies attending the composition of boards formed for the purpose of arbitrating between the respective disputants. A rapid review of the course adopted in other countries to attain the same end is then given. In Mr. Pilter's paper coöperation is extolled as the remedy *facile princeps* for strikes and lock-outs, though he does not disregard other means devised for the same purpose, such as the nomination of a permanent Royal Commission of British Workmen, established for the express purpose of adjudicating questions between employers and employed, and the cultivation of intelligence and thrift in artisans themselves. This last matter, indeed, is in our judgment the prime factor in the whole question as to the way in which trade disputes may, in the first place, be averted, and, if inevitable, be satisfactorily adjusted.

MEDICAL MEN AND DRUGGISTS IN BELGIUM.

A COUNTRY practitioner in Belgium has been complaining of the foolish severity of the law which compels those medical practitioners who, on account of their distance from a druggist, are permitted to have a surgery and dispense their own medicines, to keep certain drugs whether likely to be used or not, and to see that the stock never falls below a certain standard, and that the quality is up to the mark. The duty of inspecting these private surgeries has hitherto been in the hands of the medical commissions of each province, but now, it appears, two inspectors—not medical men, but druggists—are to be appointed for the whole kingdom, and these gentlemen will have the right to intrude themselves into any practitioner's surgery, examine his drugs, weigh his stock of couch-grass or marsh-mallow root, and fine him five francs if he happens to have half an ounce short of the prescribed quantity. How many practitioners use these, or styrax, or even liquorice root, in its crude condition? Yet all these drugs, and many more that are seldom required, must be kept to satisfy the inexorable demands of the inspector. The relations between medical men and druggists in Belgium have not, unfortunately, always been as happy as could have been wished.

Mr. T. Lafan.—The matter to which our correspondent alludes shall receive attention in our next issue.

"LOCOMOTOR ATAXY TREATED BY PHOSPHATIC INJECTIONS."

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent asking for certain details with reference to the new treatment which I have introduced into this country for locomotor ataxy and allied nervous affections, I desire to state: 1. The strength is as stated by Dr. Cordes of Geneva, and as per formula of Dr. J. Roussel, which appeared in THE LANCET of Nov. 25th, 1893. In addition to this, however, use as a vehicle aqua lauro-cerasi, it being found that the two work well together. 2. The ordinary hypodermic syringe, with an extra long needle, is used. 3. The amount is ten centigrammes of the "phosphate de soude" to one gramme of the vehicle. 4. The number of injections depends upon the gravity of the case and its concomitant symptoms. In certain cases I have seen we decided upon giving two injections per day, in others one. It is important not to miss a day, but for them to be continuous. 5. The syringe is to be inserted within one inch of the spinal column in the lumbar region, the needle very deep. 6. With regard to the other part of the treatment: in Belgium the patient has to take a bath every morning from 18° to 12° Centigrade. Massage is also ordered in these cases, and not much alcohol, with the exception of stout, one glass being ordered at twelve o'clock, and one in the evening, and with this all food is to be of a nourishing nature. Under this treatment many cases which are suitable for it quite recover their loss of power—at least this is my experience, and it is endorsed by many continental practitioners who are capable of forming an opinion. One great feature is the fact that no possible harm can ensue, whereas great good has resulted in many cases. I have another patient aged twenty-four years in whom there is hereditary tendency to the complaint. His sight had so far failed him that he could not walk alone, and his gait was as a drunken man's, persons pointing at him in the street. At the twenty-fifth injection he could see across the road, and at the fiftieth he could walk by himself, and when I passed him out walking a few days ago there was absolutely no want of coördination in his movements, and he walked perfectly straight; he informed me that all his spasms and contractions had passed away as well as other unpleasant feelings, and that he never felt better in his life. For two years he had attended as an "out-patient" at the National Hospital, and when I submitted him to the "phosphate de soude" treatment a few months ago he was gradually getting worse in every respect.

I am, Sirs, your obedient servant,

FORBES WINSLOW.

Devonshire-street, Portland-place, W., Jan. 9th, 1894.

DENTAL ADVERTISING.

AT a full meeting of the Medico-Chirurgical Society of Nottingham, held at the Society's Rooms on Jan. 3rd, Dr. Tresidder moved the following resolutions, of which due notice had been given. 1. That this meeting considers it unprofessional for registered medical men to give anæsthetics for unregistered or advertising dentists. 2. That the Notts and Derbyshire Dental Association be asked to furnish every registered medical practitioner in the neighbourhood with a printed list of the local dentists whose names are on the register and who do not advertise. Mr. Anderson, F.R.C.S., seconded in a telling speech, and, by permission of the society, Mr. Blandy, L.D.S. Edin., who had brought with him a large number of advertisements which had been exhibited to the General Medical Council, was allowed to address the meeting. He expressed the hope that every medical society in the kingdom would follow the lead of Plymouth and Nottingham in this matter. The resolutions were carried with but one dissentient.

"THE TITLE OF 'DR.'"

IN reference to the above subject, one which seems to be of perennial interest to a large number of our readers, and on which several correspondents have lately addressed us, some of whose communications we have been able to insert, a correspondent signing himself "Waiting some Reform" invites "L.R.C.P. Lond., M.R.C.S. Eng. &c." to take a stroll in the direction of Stratford or Forest-gate in order to enable him to appreciate the niceties of the situation he describes in THE LANCET of Dec. 16th, 1893. He (that is, the last-mentioned correspondent) had better come down armed with a Medical Directory, and "he will find either of these places a perfect Utopia for men holding any one of the minor qualifications. He will very soon come across brass plate after brass plate bearing superscriptions as follows: 'Dr. This' or 'Dr. That, Surgeon, Physician,' &c.; but he will doubtless be rather shocked on turning up the page to find the appellations refer to a L.S.A., varied occasionally by a L.M. In fact he will probably arrive at the same conclusion as myself—namely, that it is from no consideration for the etiquette of our profession, but rather from a careful calculation of the cost of engraving so many letters, that the full title of 'Professor' does not appear."

Dr. Rentoul.—The "Case of the General Council of Safe Medicine" was first brought to public notice by THE LANCET, which notice included the statement sent us by our correspondent. The facts are important, and we believe the General Medical Council is taking steps to test the legality of the action of the titles granted by the so-called School of Safe Medicine.

A CORRECTION.

To the Editors of THE LANCET.

SIRS,—You have done me the honour to refer to my lectures on Graves' Disease in your leading article on the pathology of that disease in the last number of THE LANCET. Will you permit me to point out that the reference to Jan. 21st, 1893, is incorrect and should be Sept. 13th and 20th, 1890. In the lecture of date Jan. 21st, 1893, I was dealing with the thyroid treatment of myxœdema and only incidentally alluded to Graves' disease.

I am, Sirs, your obedient servant,

Welbeck-street, W., Jan. 9th, 1894. HECTOR W. G. MACKENZIE.

M.D.—The case described by our correspondent is probably one of a form of Raynaud's disease, although in the great majority of cases the phenomena of this condition are more liable to be evoked by cold. The urine should be examined occasionally with reference to its colour. If it is at times dark in colour, this is probably the result of blood pigment present in it.

A. M.—We are duly grateful for the good advice given to us so freely by our correspondent. We adhere to the answer we gave to his letter in THE LANCET of July 8th, 1893. We do not differ from him in our objection to the advertisement of medical men's names and addresses in hotels, newspapers, &c.

"ANTIPYRIN."

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent "H. E. G.," we beg to say that the green body formed by the admixture of antipyrin and nitrous ether (in the presence of free nitrous acid) is isonitrodimethyloxyquinizine ($C_{11}H_{11}N_2O_2$).

We are, Sirs, yours faithfully,

Newman-street, W., Jan. 6th, 1894. ARTHUR AND CO.

ERRATUM.—In the fifth line of Mr. Louis E. Stevenson's letter on Ehrlich's test (THE LANCET, Jan. 6th, 1894, p. 73) for "5 per cent. solution of sodic nitrite" read 0·5 per cent. &c.

COMMUNICATIONS not noticed in our present issue shall receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Devon Gazette, Dundee Advertiser, Ulster Echo, Brighton Herald, Leicester Daily Post, Provincial Medical Journal, Public Opinion, Glasgow Evening Standard, Leeds Mercury, Western Morning Mail, Yorkshire Herald, Irish Times, South Wales Daily News, Liverpool Mercury, Burnley Gazette, Newcastle Daily Chronicle, Life, Birmingham Post, Kidderminster Times, Sussex News, Liverpool Daily Post, Yorkshire Post, Bristol Mercury, Weekly Free Press and Aberdeen Herald, Sanitary Record, Local Government Chronicle, City Press, Hertfordshire Mercury, Reading Mercury, West Middlesex Standard, Evening Express (Liverpool), Surrey Advertiser, Local Government Journal, West Middlesex Advertiser, Indian Spectator, Galignani Messenger, New York Recorder, Southern Echo and Bournemouth Telegraph, Pioneer Mail, Sunday Times, Citizen, Scotsman, Times of India, Builder, Architect, Wyvern (Leicester), Newcastle Daily Leader, Westminster News, Scottish Leader, Chester Chronicle, Hampshire Telegraph, Jarrow Express, Westminster Gazette, Bell's Weekly Messenger, Liverpool Courier, St. Neots Advertiser, Keble's Margate and Ramsgate Gazette, &c., &c.*

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